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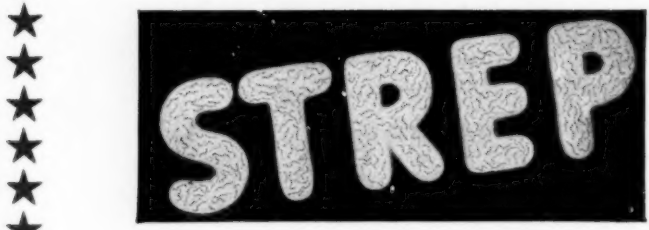

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THE recent development of a specific treatment for streptococcus infections with a synthetic substance must be considered one of the most outstanding triumphs of chemotherapy—as important in its sphere as the creation of Salvarsan and Insulin. Reports on the results published both here and abroad on streptococcus infections with this new chemotherapeutic agent have aroused deep interest in medical circles. Based upon the results of this research Alba Pharmaceutical Company, Inc., is pleased to present:

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Editorials

Increase in Coronary Disease and Its Cause

IT SEEMS to us that Denny (*New England J. Med.* 214:769-773, April 16, 1936) has put his finger on the revealing spot with respect to the increase in coronary disease. It is a condition which especially selects those who pursue sedentary lives. When the automobile came in physicians were the first to adopt it in connection with their professional activities, and therefore they have been influenced by it longer and more than any other class. Coronary disease is not likely to attack those who engage in a reasonable amount of daily physical activity. The playing of golf six months out of the year, and only once or twice a week at that, does not constitute daily exercise, and may even, in a sense, be harmful. Why the physician should be so frequently a victim of coronary disease becomes clear in the light of Denny's studies. It cannot be successfully maintained that the worry and stress of medical practice are any greater than in former periods. The tendency to lay the blame upon worry and stress is strongly marked, but more to be taken into account is the factor emphasized by Denny.

Denny also reminds us that another machine—the elevator—tends to lessen our exertions. The oil heater lessens the effort once expended upon the coal furnace. Life in apartment houses takes us out of the garden and relieves us of such chores as shoveling snow. Walking is simply not done.

So, making no reasonable daily effort we suddenly discover that we are unable to make any at all. Nature then, through the instrumentality of a seemingly tyrannical fellow practitioner, throttles down or reverses our engines, and thrusts us into bed for three months—a perfectly logical reprisal when one thinks about it.

Bastards of Æsculapius

THE so-called Bastards of Æsculapius —barbers with their vacuum electrodes and vibrators, osteos, chiros, naturos, cranios, prescribing druggists, natural bone-setters, superheterodyne nurses, herb growers and all sorts of ligament twisters and pullers are more and more in evidence.

These will always thrive because there is a certain proportion of the population which simply will not deal with a first-class medical man. As Logan Clendening puts it: "I often wonder how it is possible for so many of my intelligent and well-to-do friends to get through life without once having had the experience of consulting a really first-class medical man. They are always going to some oily fly-by-night and boasting about some outrageous treatment based on a still more fantastic diagnosis. It seems incredible that they are going to die and go to limbo without ever having enjoyed the holy calm of having placed themselves in the hands of a man who was honest, competent and understanding."

New crops of the Bastards come to the surface each year. The 'phone tingles. The colonic irrigator gives you a description of a bowel movement one of your patients had—a description as vivid as Keats in his "Eve of St. Agnes" or James Whitcomb Riley's "Passing of the Backhouse." One wonders how these birds can tell one so much about human feces—mucus, hard marbles, foul odor, pockets and pockets of gas and so on.

Now beauty parlors are becoming colon filling stations. Madame can get her entrails flushed out with barrels and barrels of water—the more the merrier so she can tell all about it at her luncheon party. Then some superheterodyne irrigator will tell you that he washes out the cecum with gallons of water. More power to him; before he gets through he'll be pumping out the stomach, backwards.

A new thing has cropped up. Some beauty parlors have installed diathermy machines, claiming that you are subjected to heat from 7500 coils which create a magnetic field all over your carcass, and millions and millions of oscillations.

Don't forget the short-wave. They'll all have it before long. Radio waves right through clothing—corsets and all. The fat and bones are heated, too. All you have to do is to buy a machine and the salesman will teach you all about it in fifteen minutes. Think of it—fifteen minutes and you can turn your equipment into cash. Not bad. But if the writer is not mistaken someone will get a good deep tissue burn before he realizes it. It's not so simple as it looks. They have a lot to learn about physical therapy yet.

The latest whoopee is the craniotherapist. He says it's all in the head and no doubt he's right.

M. W. T.

Harvard is Humbled

THE favorite indoor sport of Professor Hooton of Harvard is depreciating the modern man. Man, it appears, is now lower than the apes in point of posture, method of locomotion and construction of the body. His attempts to control himself and spread his culture through the use of language are ineffective. His preservation and prolongation of the lives of the constitutionally inferior is playing havoc with him biologically. The Professor sees senile decay dominating dementia precox in a world of diminishing average intelligence. Man has invented fire and it turns and destroys him. His invention of poison gas turns out to be another fatal paradox. Professor Hooton seems to say, if we understand him rightly, that the conquest of infectious disease would intensify man's biologic demoralization, since it would contribute to the further salvation of the lame, the halt and the blind.

It's all very terrible; man is selling his biologic birthright for a mess of morons; his voice may be the voice of democracy, but the hands are the hands of the apes.

Professor Hooton goes so far as to say that if a visiting committee of anthropoid apes were to look us over they would be first shocked and then suffused with a feeling of satisfaction because of the superiority of their own system of life.

Are things really as bad as they seem to be in Cambridge?

Poor Health and the Scholarship of New England

VAN WYCK BROOKS, in *The Flowering of New England*, explains the coldness and sterility of the scholarship of 1815-1865. Quoting Parkman, he informs us that that scholarship was lifeless—"void of blood, bone, sinew, nerves and muscle." The explanation is really Parkman's, to the effect that this lifelessness was the result of an old New England custom. "In households of small means, the privilege of going to college usually fell on the son whose feeble health unfitted him for ruder labors." "Narrow-chested" and "hectic" boys were chosen for the sedentary life, "with sad results in the world of books and thought."

This is a very penetrating thought and serves to make clear very much that has puzzled us about over-rated New England celebrities. It was a very sedate "Flowering" that the years 1815-1865 witnessed; there was no blinding glory in the garden—no creative geniuses and but little charm.

Those who have witnessed a spring in our South know very well that the spring of the North is a counterfeit. The Flowering of New England was *not* like a Southern spring.

There is another factor to consider. Sacred tradition aside, how good was the stock that arrived in the Mayflower? How many simpletons, of low ethnical and social type, did the village of Scrooby contribute to the settlement of the Old Colony? And how large a proportion of imbeciles made up the population of Salem and its witchcraft mobs of 1692, with a record of nineteen hangings and that ineffable method of execution, "pressing to death"?

Why was the hollow Everett about the best product of the civic side of New England? Why, indeed?

As further bearing upon the thesis of inferior types, there is much significance, it seems to us, in the amazing prevalence of sexual offences among the Pilgrims and Puritans (*American Mercury*, April, 1924). The rich human crops of fanatics and eccentrics produced by the social soil of New England doubtless bear a meaning for us as well. Today scions of the "old stock" crowd the state institutions.

So against the commonplace background, deadly in degree, furnished by Mayflower descendants, even a Longfellow and a Whittier stand out rather brightly; an Emerson, with his view of life borrowed from the sacred writings of India, glows with a factitious bril-

liance; with a Thoreau and a Hawthorne Van Wyck Brooks can create figures who seemingly shine. In all this the most interesting thing is, of course, Van Wyck Brooks himself, a critic with a touch of the creative in him presenting the second-rate New England figures cloaked in a glamour that is unreal but necessary for his subtle and effective literary purposes, the while smiling quietly to himself. Yet even a Brooks can do little with a vain windbag like Everett. With a host of other nonentities whom he is obliged to discuss, creatures "made of soft pine instead of oak," Brooks, for all his cleverness, is badly handicapped at times; here his efforts provide much comic relief for the reader of the book, something we suspect was not altogether unintended.

Some Lesions of Captains and of Kings

THE upper central incisors of a European dictator were caught in a recent photograph by an Associate Press camera, presently appearing in American newspapers. Into the medical observer's mind at once flashed "Hutchinson's Teeth;" for there were the peg-shaped, notched incisors, with cutting edges smaller than the bases of the teeth and the notches reduced by adult erosion.

The laughing portrait started a train of thought. One recalled the rulers of the past in whom a luetic taint influenced the course of history in sinister fashion—Ivan the Terrible, Henry VIII, Edward VI, Mary Tulor, Philip II of Spain, Frederick the Great, Marat, Lenin. A ghastly gallery, from the spirochetic standpoint.

It is a question as to which has played the most horrid part in the warping of rulers', statesmen's and jurists' judgment—syphilis in the young and middle-aged, or arteriosclerosis in the aged. Senile degenerative changes in the brain and body have vied with the cerebral and somatic tissue devastation wrought by the spirochete. To which wrecker shall we award the palm?

"Old men feel death approaching, and they fear it . . . As a man grows older, though the likelihood of his death become more and more with every passing year, his clinging to bare life becomes more intense" (Charles MacLaurin, in *Post Mortems of Mere Mortals*). When, although senile, he engages in important activities, he is really putting on a *sham* battle with death which serves no one's interest, not even his own, for the outcome is ironically obvious. The "outcome" has indeed occurred, for he is *not living* in the real world of his day.

Milksops of Yesteryear

VISCOUNT ASTOR, who recently presided at a meeting of representatives of national committees on nutrition of eleven countries, including the United States, under the auspices of the League of Nations, stated on that occasion, in an interview, that "Most people are out of date on nutrition and malnutrition—my own wife is." This statement recalled the pictures of the Astors' very sweet little children that used to appear in British and American publications some years ago, revealing a state of malnutrition that was rather painful to look upon, and the genesis of which we wondered a good deal about. Lord Astor himself, in the aforesaid interview, disclosed what was probably the trouble, although he was ostensibly talking about the children of the poor. He said that "Most persons associate malnutrition with hunger or starvation and do not realize that nutrition is a matter of eating the right foods. It is not enough to satisfy the stomach. One must give a proper proportion of the so-called protective foods, milk, green foods, vegetables, etc., especially to children." When the Astors' children were small they probably, in common with most children of the well-to-do, received a disproportionate amount of milk and did not properly develop the muscles of the jaws, with consequent orthodontic defects and general physical frailty. Such children have little or no caries; they get more than sufficient calcium but no development of the maxillary muscles. Without muscular development there can be no bone development, and without bone development the teeth can have no proper setting, so to speak. But today milk is more often properly balanced in the dietary of children than in the days when the children of the Astors were young.

The Maternal Instinct Not Amenable to Ballyhoo

IN THE ballyhoo for birth control sight is nearly lost of that large contingent

of women who have very strong maternal instincts, and who differ greatly from the freaks who deliberately and assiduously court complete or partial sterility. This is brought out very conspicuously, at times, when such women suspect themselves, rightly or wrongly, of belonging to the ten per cent unfruitful group; no birth control propagandist presents nearly so much determination; the obstetrician and gynecologist will tell you that, and they will tell you how numerous these women are. But this group lacks a battery of windbags and a press; nobody organizes, for them, committees for social, economic and legislative action; no lobbies threaten office holders with political perdition if they fail to pass laws aimed against overt acts calculated to discourage motherhood; nobody writes emotional books reciting pathetic instances of such women's struggles to bear babies; there is no guaranteed contraption on the market capable of being commercially exploited on a vast scale in their alleged interest; and no aggressive protagonist, purporting to represent thwarted mothers, demands that the woman electing to be sterile shall be licensed, the dubious privilege being severely restricted through high fees in legitimate cases and social obloquy in illicit ones.

This seems to be almost a lost cause; publicity and profits are not to be had through it; it cannot be ballyhooed; there is nothing to sell.

Naturally, we do not take such a curious thing into much account.

How They Brought the Good News From Baltimore

WE SUPPOSE that every schoolboy still reads the poem of Robert Browning—"How They Brought the Good News from Ghent to Aix":

> I sprang to the stirrup, and Joris, and he;
> I galloped, Dirck galloped, we galloped all three.

Glad tidings again thrills us when we read advertisements in the quasi-medical press of that Baltimore drug company which has for so many years been the inspired and monopolistic purveyor of America's most famous and favored effervescent draught for hangovers and headaches. No need to name the acetanilid cocktail that has made millions for its owners and soothed many a meningitis, brain tumor and sinusitis deserving of better consideration and care.

We who have for so long benightedly suspected the cold-tar derivatives of evil potentialities and have maligned them accordingly are due for a jolt and an apologetic conversion. For it now turns out that they are "relatively harmless and useful" products of whose transcendent virtues we have stupidly hesitated to avail ourselves fully. In the light of the new gospel our dosages in particular have been ludicrously microscopic.

"It is an open question whether the coal-tar derivatives by their lessening pain, if pain as such, of the whole body, could be measured, have not done more to make life comfortable and agreeable than any other discovery of ancient and modern times, even surpassing the benefits of general anesthesia." Get that, reader, and feel properly rebuked and chagrined at your recalcitrancy and obscurantism.

Moreover, "The coal-tar derivatives do not present serious problems. They are in no sense dangerous drugs. . . . They are relatively free from any ill effects."

"The coal-tar derivatives provide an insignificant number of cases of 'addiction' or 'poisoning', and admittedly, the cases called 'addiction' were not true addiction, and the cases of 'poisoning' not true poisoning."

The cyanosis observed at times when coal-tar derivatives are being employed is due to idiosyncrasy or to the sulphemoglobinemia of intestinal putrefaction, not to the drug.

The lethal dose of acetanilid is declared to be 1300 grains for an adult. That would be something over two and a half ounces. Dogs have been fed daily, for eleven weeks, amounts equivalent to four drachms for an adult, without metabolic changes or fatalities. Could not the therapeutic dose, then, of acetanilid, very well be multiplied many times? The facts adduced should make us realize how foolishly timid we have been—and cruel to the suffering.

Acetanilid is alleged to be far "weaker" than acetylsalicylic acid; in fact, the latter is nearly three times "stronger." This seems to be a thrust at a competitive

—Continued on page 208

Clinical Studies In RENAL DISEASE II*

MALIGNANT HYPERTENSION: A SYNDROME

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OUR subject is still quite controversial. There is dispute about the definition, in fact, the very existence of this condition, about its etiology, pathology, clinical characteristics, and treatment. There is still a widely held conception that this condition represents a specific disease entity, although recently evidence to the contrary has been accumulating. It is to this phase of the subject that we wish to direct attention.

To go back a little into the history of the development of our knowledge of this subject, many will recall the time when the nephropathies were divided into chronic interstitial and chronic parenchymatous nephritis with another compartment for arteriosclerosis. I can still remember puzzling over certain patients in those days who did not fit into any of these categories: relatively young people with exceedingly high blood pressure, damaged vision, and a good concentration of the urine which seemed to rule out chronic interstitial nephritis.

In 1914 came Volhardt and Fahr's epoch-making study in Bright's disease with their classification which is the basis of all other classifications since then. They made room in this classification for a hybrid condition of a sort apparently part vascular and part nephritic, which they termed combination form nephritis, and explained as a nephritic process engrafted upon an essential hypertension—the malignant form of essential hypertension. Such a condition, primary hypertension with secondary nephritis, undoubtedly does actually exist, and we encounter it every once in a while, but it does not account for the condition which we have under consideration.

In 1919 Fahr described some details of histological pathology which he believed to be pathognomonic of malignant hypertension. I refer, of course, to the necrosis found in some of the smaller vessels, particularly the afferent arterioles and some of the loops of capillaries in the glomeruli, and to the proliferative endarteritis. Other details of the renal picture have been filled in by many observers since Fahr's time, and should be briefly mentioned. The necrotic arteriole may be infiltrated and surrounded by extravasated blood corpuscles. Blood is found in the capsular spaces and the glomeruli exhibit collapse, definite inflammatory characteristics in the presence of adhesions, capsular crescents, endothelial proliferation, and round cell infiltration. There are also evident interstitial cellular infiltrations, more commonly round cell than polymorphonuclear, varying degrees of tubular degeneration and malformation, that is, atrophy or hypertrophy or dilatation, and, of course, areas of interstitial fibrosis. These changes were described in detail by Klemperer and Otani[1], and in particular the details of the vascular alterations are summarized very well in the recent paper by McMahon.[2]

In following through our recollection of the history of this subject, may I next turn to the paper that was most influential in drawing the attention of American clinicians to the problems involved. I refer to the work of Keith and Wagener[3] which appeared in 1924, describing a group of fourteen patients observed at the Mayo Clinic. The title of their paper spoke of "cases of marked hypertension, adequate renal function, and neuroretinitis." When studied these patients all had adequate renal function as shown by good power to concentrate, practically normal blood chemistry, and phenolsulphonphthalein tests. They all exhibited very high blood pressure, par-

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* No. 1 of these Clinical Studies appeared in International Clinics, 1-17, 1937 (Milton Platz, Tasker Howard, Eugene R. Marzullo).

ticularly the diastolic, all complained of severe headache, four of the fourteen had convulsions or transient palsies, half of them had lost weight significantly, none of them were anemic, and all showed high grade neuroretinitis. Twelve of the fourteen were dead inside of fifteen months. They labeled these patients, and properly so, I believe, malignant hypertension in spite of the fact that Volhardt and Fahr had first used that term to denote vascular disease culminating in uremia. There is another definite type of case, namely, the old arteriosclerotic whose renal units have been slowly obliterated by extensive vascular narrowing, so that there is a gradual failure of renal function, sometimes to the point of fatal uremia, but failing to exhibit the peculiarly high blood pressure, the stormy and rapidly clinical course, or the final pathological evidence of rapid kidney destruction through multiple tiny infarcts, if I may call the local lesions by that name. Incidentally, these patients tolerate uremia remarkably well.

Wagener and Kieth's paper was soon followed by other American studies, notably those of Murphy and Grill[4] from Milwaukee, later papers by Keith and Wagener[5], by E. F. Cain[6], by Pratt and McMahon[3], and Shapiro[7] from the Cook County Hospital, and by Weiss, Parker and Robb[8] in their interesting study of the patient in whom one nephrectomized kidney could be compared with the kidney which remained *in situ* until death, etc.

From these studies a fairly clear clinical syndrome seems to have been brought out. The patient is usually in early middle life, more often a man than a woman, who rather abruptly, or following a more gradual course, develops an inordinately high and obstinate blood pressure, both systolic and diastolic. Rest in bed has much less influence upon it than in the ordinary case of arterial hypertension, nor do the usual drugs accomplish what is expected of them. Headache is a common and severe symptom, occurring typically most severely in the morning and affecting the occipital region. Increasing debility is always present and many of these patients tend to lose considerable weight. Intermittent claudication is not uncommon. Cardiac involvement is sometimes shown in the development of congestive heart failure or coronary narrowing with its consequent angina and perhaps occlusion.

The eyes are always involved in full blown instances of malignant hypertension. The arteries are obviously spastic. Some edema of the nerve head is said to be present in one hundred per cent of the well developed cases. The nerve head itself and the retina are quite red, unless the patient has gone on to the stage of uremia. The pale eyegrounds in chronic nephritis have been contrasted with the red eyegrounds in the malignant phase of essential hypertension, the explanation being that nephritis is regularly accompanied with anemia of some degree whereas in malignant hypertension the anemia does not supervene until the onset of uremia, which may be late. The degree of swelling of the disc is somewhat dependent upon the intracranial pressure. Retinal hemorrhages are common, and the small white spots of retinal degeneration, sometimes arranged in firework patterns about the macula, or the snow bank or cotton wool patches all occur.

CEREBRAL involvement is common and important, not infrequently accounting for death before the development of renal failure. Besides the headache there is apt to be vertigo, vomiting of cerebral origin, episodes characterized by unconsciousness or convulsions, the false uremia of Widal, and the hypertensive encephalopathy of Oppenheimer and Fishberg. A fatal termination may occur in the form of a cerebral hemorrhage or thrombosis, or the patient may die as one of mine did, from severe and persistent hypertensive encephalopathy without gross cerebral lesions.

The renal involvement may lag behind the rest of the picture or may predominate from the start. The urine shows a good power of concentration until fairly late, but usually contains some albumin and frequently a little blood or even frank hemorrhage. Renal compensation may be preserved through a very severe course. The break is apt to come quite suddenly. The nonprotein nitrogen and its constituent bodies mount very rapidly, and along with it there is very apt to be phosphorus retention. These changes are accompanied by a rapid diminution in red cells and hemoglobin. Clinically the patient shortly exhibits the well known picture of uremia and acidosis, of course fatal in outcome.

Treatment

The usual medical treatment in this condition has proved utterly inadequate in checking the disease as far as I can make out. This does not mean that there is nothing to be done. The many palliative measures, however, will not be discussed here, but I shall pass on to the surgical treatment because of its bearing on the problem of the nature of the condition.

The surgical treatment is quite new and my knowledge of this subject is entirely through the accounts of the experience of other men with this method. Pieri is credited with having first suggested sympathectomy for the control of serious hypertension in 1923, and Rountree and Adson reported a not very successful case in 1925.[9] Later Craig improved the technique and the Mayo group have seven cases to their credit. They reported good results in the milder types, when both splanchnic nerves were resected, but believed that the operation was inadequate when more than a little organic change had occurred in the vessels. Some French surgeons are quite enthusiastic about their results. Partial adrenalectomy was first done by Galata and Aritonucci in Italy in 1929. DeCourcey, DeCourcey, and Thuss[10] in 1935 report two successful operations of this nature. Adson and Brown[9] have devised a rather radical operation consisting in the division of the anterior rami from the sixth (later ninth) dorsal to the second lumbar spinal nerves. This procedure not only paralyzes all vasomotor control in the great splanchnic areas, but paralyzes also the abdominal muscles, so that there is a decided fall in intra-abdominal pressure. The operation was suggested by the striking fall in blood pressure which occurs during spinal anesthesia. The authors first carried it out five years ago, and since that time have operated on twenty-six other patients. In the series there was one death, and autopsy disclosed an adenoma of the adrenal which the operators felt was a handicap. In all the patients there was a striking fall in blood pressure which was much more marked standing than with the patient lying down. The fall in blood pressure while standing could be somewhat diminished by the use of a tight abdominal binder, replacing the paralyzed abdominal muscles. Sweating was abolished below the level of the diaphragm. Hypertensive symptoms such as headache, vertigo, etc., were abolished, and, in the patient who has been watched since 1930, the disease has presumably been checked, although his case was complicated by the occurrence of a postoperative spinal hemorrhage. One patient suffered retention of urine for several months. Several complained of troublesome pains in their legs. Page and Heuer[11], at the Rockefeller Institute Hospital, performed this operation on a patient on whom very careful renal functional studies were made before and after the operation. They found that the fall in blood pressure did not interfere with the renal capacity. This patient was doing well seven months after the operation. Craig and Adson[12] later went back to a simpler technique and have operated on seven patients, resecting both pairs of splanchnic nerves and the two upper lumbar ganglia, besides removing a bit of one adrenal. They report excellent results in five of the seven, and fair results in two. They noted one curious fact, namely, that the retinal artery spasm was seen to disappear after splanchnic resection.

Perhaps sufficient time has not elapsed to conclude that reduction in the persistent and extreme hypertension exhibited by patients suffering from malignant hypertension is able to check radically the disease process, but indications seem to point in that direction. It is for this reason that I have postponed to the end of the paper any consideration of etiology.

Etiology

Cases more or less typical of the malignant hypertension which I have just described have been reported in which the apparent underlying cause was basophile adenoma of the pituitary, adenoma more or less frank occurring in the suprarenal medulla, chronic lead poisoning, toxemia of pregnancy[5], and finally chronic glomerulonephritis, as pointed out by Derow and Altschule[13], and by Kimmelstiel and Wilson[14]. I believe that not very infrequently a nephritic patient may somehow or other acquire an extreme degree of hypertension, and that the vascular spasm causing this phenomenon causes also a rapid

further disintegration of the kidney with the development of the necrotic arteriolar lesions which are supposed to be characteristic of malignant hypertension. Klemperer and other pathologists have reported the presence of these lesions in patients who upon clinical grounds as well as from certain other histological changes one would assume to be suffering from actual nephritis. Klemperer's patients both exhibited extreme hypertension.

Conclusions

May one not conclude from these facts that malignant hypertension represents a clinical syndrome; that this syndrome may be caused by nephritis, suprarenal or pituitary disease, most commonly of all by *essential* hypertension, or any other disease characterized by well marked arterial hypertension; that widespread arteriolar spasm is responsible for the extreme hypertension and for the structural and functional changes; that the fully developed syndrome presents a distinctive clinical course and often distinctive pathological findings, but that since it depends upon such a variable quantitative factor as the degree of vascular spasm there will always remain borderland cases, the classification of which will be a matter of personal judgment? If the nature of the condition is recognized, classification is of relatively little importance.

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46 SIDNEY PLACE.

Coronary Occlusion: THE DOCTORS' SPECIAL DISEASE

MILTON D. GRAHAM, M.D., Utica, N. Y.

DURING the last fifty years, the average length of life has increased seventeen years. In the seventeenth century, when the American colonies were first founded, the average length of life was thirty-three years. In the eighteenth century, when the United States became a free and independent country, it was thirty-nine years. In 1880, in New York City, it was forty-one years, and, in 1930, the average length of life was shown statistically to be fifty-eight years. This has been brought about by better sanitation, the great decrease in infectious diseases, and by the rapidly declining infant death rate.

In former ages, the populations of all countries were constantly being afflicted and depleted by such diseases as smallpox, cholera, diphtheria, tuberculosis, typhus and typhoid fevers, malaria and dysentery. In our day, in our country, and in most civilized lands, these diseases have either been practically abolished, or have been so brought under control that the death rate, except from tuberculosis, is now negligible. So that it is a fair presumption, if we wish to increase the average length of life still more, that we must increasingly study, and treat, the diseases of metabolism and the degenerative diseases.

In looking over the obituaries, in the *Journal of the American Medical Association*, and in perusal of the daily press,

Retiring President's Address, Medical Society of the County of Oneida, New York, January 14, 1936.

the speaker is much impressed by the number of doctors and prominent laymen who are dying of coronary occlusion or coronary thrombosis.

Let us consider what coronary occlusion is. It is the sudden blocking, or occlusion, of one of the main branches of the coronary arteries, by a thrombus or embolus.

The two coronary arteries, the right and left, or anterior and posterior, arise from openings behind the cusps of the aortic valve.

The left coronary artery branches shortly after its origin, one branch going towards the left, in the auriculoventricular groove, and supplying the left auricle and the posterior portion of the left ventricle, while the other, and usually larger branch, descends on the anterior surface of the heart, down the interventricular sulcus, and passes part way up the posterior surface, after rounding the apex. This anterior descending branch, near its point of origin from the main left coronary artery, is much the most commonly affected, both by sclerotic change and by thrombosis, and this branch of the left coronary artery has been called, by Paul White and others, the artery of sudden death, or the artery of cardiac infarction.

The right coronary artery supplies the right ventricle and right auricle, and sends branches to the posterior part of the interventricular septum. The second most likely place of occlusion is the posterior wall of the left ventricle, near the base, which is also supplied by the right coronary, and such occlusion is due to thrombosis or occlusion of the right coronary artery at this point.

After the obstruction takes place, if the patient does not die at once, an infarct forms. A certain amount of cardiac muscle ceases to obtain a nutritive supply, and necroses or dies. Individual muscle fibers, or groups, necrose, and, if the patient survives, are replaced by scar tissue.

Pathology and Etiology of the Disease

The obstruction in the coronary artery is most commonly a thrombosis, secondary to local disease of the coronary artery. The coronary artery usually shows the changes of atheroma, a fatty degeneration of the intima and media with calcification. Sometimes there is an arteritis of inflammatory nature. Sometimes it has resulted from bacterial infection, at other times from syphilis. But White, Levine and Wearn have shown that syphilis plays a very minor part. Again, the obstruction may be an embolus, brought from vegetations on the valves of the heart, or elsewhere in the vascular system, but this is rare.

The lumen of the coronary artery may in some instances have been gradually narrowed by the pathological process in the vessel wall to the diameter of a pin point, so that final obstruction takes place in a vessel of very small caliber. This gradual narrowing of the lumen of the coronary gives time for a rich collateral circulation to develop, from some other coronary branch, by gradual dilatation of small anastomosing vessels. Wearn, Grant and Viko have demonstrated, in the human heart, the extensive ramification of the thebesian vessels, which are small channels connecting coronary veins and capillaries with the vasculature of the heart; so that, when there is a complete coronary occlusion, the thebesian vessels can transport widely both arterial and venous blood.

Most cases of coronary occlusion are past fifty, but there are fairly numerous cases between forty and fifty, and one case at thirty years has been reported. Christian reports that of sixty-two fatal cases coming to autopsy, forty-four were males and twenty females. Alcohol, tobacco and exercise seem to have little influence in causing the disease.

Symptoms and Diagnosis

A man or woman, usually between fifty and sixty years of age, who may have never had any serious illness, and who may boast of good health, while in bed at night, or while sitting in a chair, may suddenly be seized with a sharp, agonizing pain in the heart region, more often under the upper part of the sternum, or it may be over the epigastrium. The pain may radiate over the whole chest, and may, or may not, radiate down to the inner surface of the left arm, or up the left side of the neck; less frequently to the right arm or neck. The pain does not go away. It may last for hours, or, if the patient survives, it may last for two or

three days. The patient has severe dyspnea, and becomes more or less cyanosed. He is often nauseated, and occasionally vomits. He feels as if he were going to die at any minute. There is a group of cases in which there is no pain, only sudden, distressing dyspnea, followed by profound weakness and possibly nausea. But the most common symptoms are severe pain, dyspnea, and more or less cyanosis. There is a fall of blood pressure. The pulse is poor in quality. It may or may not be rapid. In many patients, the pulse remains regular, or is irregular for only brief periods. The lungs quickly show mucous râles in the bases posteriorly, and this is an important point in the differential diagnosis of acute abdominal conditions. There is usually some fever on the second or third day, and there is usually a leucocytosis of the polymorphonuclear type of from 12,000 to 20,000.

Barnes and Whiffen have shown that a negative T wave, in leads one and two, is evidence of occlusion in the anterior descending branch of the left coronary artery, and a negative T wave, in leads two and three, is evidence of occlusion in the right coronary artery. If the electrocardiogram shows such changes, the diagnosis is positive. But if, in a suspected case, there are none of these changes in the electrocardiogram, that does not rule out coronary thrombosis. The electrocardiographic changes are convincing only if positive.

Differential Diagnosis

In angina, there is the same age group. The pain is violent, viselike and agonizing, and there is fear of imminent death. There is no dyspnea, no cyanosis, and pallor is the rule. The blood pressure often rises; the attack is over in a few minutes. Any increased effort produces another attack of angina. Placing of a tablet of nitroglycerin, gr. 1/100, under the tongue, or inhalation of amyl nitrite, usually stops the attack quickly, but these drugs have no effect on the pain of coronary thrombosis or occlusion. Sometimes, an attack of coronary thrombosis is preceded by several years' experience of angina pectoris attacks. The difference can be recognized by the fact that the coronary attack lasts longer, is accompanied by dyspnea, and is not brought on by effort.

Acute Abdominal Conditions

Often the diagnosis between acute abdominal conditions, such as perforation of a duodenal ulcer, perforation of a gastric ulcer, acute cholecystitis and acute pancreatitis has to be made. A previous history of attacks of pain, with shortness of breath, should put one on one's guard. Crackling râles, at the bases of the lungs, are an important differential point; they are practically always found in attacks of coronary thrombosis, due to the disturbed circulation of the left heart, so that edema of the lungs results very quickly. In attacks of coronary thrombosis, there may be pain at the tip of the ensiform, or over the epigastrium, and there may be nausea, vomiting and a board-like abdomen. Such patients, not infrequently, have undergone exploratory operations for abdominal lesions, only to reveal later, on autopsy, that there was a coronary thrombosis.

An x-ray of the abdomen may be of considerable help. If the gastro-intestinal tract has been perforated, air escapes into the abdominal cavity and can be easily visualized.

Prognosis

Herrick divides the cases into four groups.

1. The first group consists of cases which die instantaneously; there is no struggle, the heart and breathing stopping suddenly.
2. The second group consists of cases in which death results in a few minutes to a few hours. These are often the cases which are found dead in bed.
3. The third group includes cases in which death is delayed for several days or months, or in which recovery occurs.
4. The fourth group consists of light cases, in which there is only slight precordial pain, ordinarily not diagnosed, but due to obstruction in the smallest branches of the arteries.

Some cases recover entirely, and remain free from attacks for several or many years; one reported case remained free for thirteen years.

Methods of Treatment

The only drug which is of value for the immediate attack is morphine, in doses of gr. ¼ to gr. ½ repeated as necessary, and it is often surprising

how quickly the pain, cyanosis and dyspnea will subside after a hypodermic of morphine. Nitroglycerin and amyl nitrite have no effect and are even contraindicated, when one considers the damage done to the heart. In regard to digitalis, cardiologists differ. Warfield, of Ann Arbor, says to wait until the heart has somewhat rallied from the first profound shock, and then to digitalize the patient quickly, after which one can give doses of 1 cc. of the tincture once or twice a day over a period of several weeks. Christian, of Harvard, does not use digitalis, except in patients with a preceding cardiac insufficiency. He uses caffeine, in doses of gr. 5 to gr. 10, when there is a failing pulse and evidences of cardiac collapse. He also advises the use of epinephrin (adrenalin chloride) intravenously, and by intracardiac injection in the presence of grave circulatory failure, or cessation of the pulse beat. Paul White, of Harvard, uses morphine and digitalis in coronary thrombosis.

THE consensus of opinion, in articles published in the accredited medical press during the past year seems to be not to use digitalis, unless congestive failure results as a sequel of the coronary attack. Many of the authors favor the use of caffeine sodio-benzoate in doses of 5 to 10 grs., repeated as indicated.

Occasionally, when there is a ventricular tachycardia, which is uncommon, in coronary thrombosis, quinidine sulphate gr. 10 can be used if the heart is extremely rapid. This is repeated every 4 hours, for several doses, until the heart slows down. If there is a positive Wassermann test, antisyphilitic treatment can be cautiously started, in recovering cases. There is some risk in the use of arsphenamine. The patient should be kept in bed for six weeks, and then there should be a very gradual return to physical exertion. The diet at first should be liquid. Later on, five feedings a day, of semisolid food and milk, may be given.

The after-treatment of the cases should be directed to the underlying condition if known, or to the treatment of atheroma, or arteriosclerosis in general. Alcohol should be forbidden; tobacco should be used sparingly, if at all. Overexertion, both mental and physical, is injurious. The quantity, as well as quality of the food, demands careful revision. Iodides in small doses, over a long period, sometimes are of value. The periodic use of mild mercurial, or saline, aperients is serviceable.

After six months, the Nauheim baths may be ordered, in suitable cases. In ordering the Nauheim baths, we may take advantage of the state-owned saline baths at Saratoga Springs, which are extremely well-equipped and upon which $8,500,000 has been expended up to the present time. Chief among the treatments given, at the Saratoga spa, is the Cardiac Therapy, which is basically the Nauheim system, developed by the Schott Brothers and the Groedels, of Bad Nauheim, Germany. It has been found effective in coronary sclerosis, and in arteriosclerosis in general. The Nauheim baths are given only on prescription as to gas content, temperature and duration.

I have been assured, by physicians at the spa, that they believe that the Nauheim Baths are a suitable and effective treatment in the after-cure of patients suffering from coronary thrombosis. They have the feeling that, in general, a minimum of six months should elapse, following the thrombosis, before taking the baths.

The carbon dioxide gas content is reduced to approximately one-half to three-fourths of the normal gas content of the waters, which are approximately 135 percent supersaturated. The amount of reduction in the gas content of the water depends on the clinical condition of the patient.

The temperature of the baths used in these cases ranges between 90 degrees and 95 degrees, with a tendency toward the lower temperature toward the end of the course of treatment.

The duration of the bath is 6 to 8 minutes at the beginning, and 11 to 12 minutes at the end of the course of treatment.

The baths are given three, four or five times a week, depending on the patients' condition. Some patients require a rest day for every bath taken; others may take two baths, and then have the rest day. The average length of treatment is four weeks, during which time they will have from 18 to 20 baths prescribed.

How do the baths produce their beneficial effects on the cardiac muscle and the coronaries? There is a more efficient emptying of the heart; there is some aid in the return of the blood to the heart;

there is a reduction in the peripheral resistance, due to dilatation of the peripheral vessels; there is a slowing of the pulse rate.

Dr. Alexander Lambert of New York says that cardiac degenerative diseases are also benefited by the good effect of the carbon dioxide baths on the autonomic nervous system. At the new Research Institute at the spa, they hope to give, in the near future, a more complete physiologic explanation for the benefits observed in these patients.

Total thyroidectomy, in certain selected cases of angina pectoris and in selected cases of decompensated heart disease, has been established as a valuable procedure, but I am unable to find where it has been of any benefit in cases of coronary occlusion.

Case Report

White, married housewife, 57 years of age. Father died of Brights disease, aged 60 years. Mother died of heart and kidney disease, aged 61 years. Past History —Diseases of childhood, including scarlet fever. At the age of 34 years, she had an abdominal operation, when the appendix and parts of both ovaries were removed. At the age of 51, she was told that she had a high blood pressure, and was treated for this condition at intervals. Following an auto trip to the Thousand Islands, and return next day, she was awakened at two o'clock in the morning with a severe pain in the chest. The pain was felt chiefly under the middle and lower portions of the sternum. It did not radiate. There was dyspnea and cyanosis. She felt a fear of impending death and said continually, "I am dying." The heart sounds were rather distant, but the rate was not much disturbed, being 60 per minute and regular. The heart was enlarged markedly, to the left of the midclavicular line. The blood pressure was 200/120 mm. There were crackling râles at the bases of both lungs, posteriorly. She was given morph. sulph. gr. ¼ and digifoline 1 cc. hypodermatically, and within ten minutes she was markedly relieved. The dyspnea and cyanosis cleared up rapidly. The temperature on the second day was 99.5. On the third day the temperature was 100. The leucocyte count was 14,000. The urine was negative and the Wassermann reaction was negative. Electrocardiogram showed negative T waves, in leads one and two. Diagnosis Coronary thrombosis, probably, of the anterior descending branch of the left coronary artery. She was kept in bed for six weeks. The crackling râles at the bases of the lungs were entirely gone on the third day and she made an uneventful recovery. After about a year, following another long auto ride, she suffered much the same kind of attack, being awakened from her sleep at about 2 A.M. Had the same very severe, substernal pain, dyspnea, cyanosis and fear of impending death, crackling râles at bases of lungs, fever and leucocytosis. This attack was again quickly relieved by morphine and digifoline. The attacks came twice in the third year, three times in the fourth year, three times in the fifth year, and during the sixth year the attacks came about every two months. Spent most of the sixth year in bed.

During the course of her illness she was in the hospital several times, spending many weeks there.

The attacks always came at night, from 2 to 6 A.M. There were always dyspnea, cyanosis and râles. Her blood pressure was always high, from 200 to 260 systolic and from 120 to 150 diastolic, except during the attack, when it was markedly lowered. In the sixth year, she had albumin and casts in the urine most of the time.

The final attack came with a severe pain in the epigastrium and board-like abdomen. There were dyspnea, cyanosis and râles all over the chest. She quickly became unconscious, but lived about eighteen hours. Autopsy was refused.

Impressions: From the fact that she survived so many attacks I believe that finally there was a complete, bilateral coronary occlusion, and that in the sixth year at least, the heart muscle derived all its nutrition from the thebesian vessels. Slater and Kornblum have reported similar cases. She died at the age of 63, living 3 years longer than her father, who died of Brights disease, and two years longer than her mother, who died of heart and kidney disease.

Conclusions

What is the real cause of coronary thrombosis? Warfield says the condition is due to atherosclerosis in general, and until we know what that is, we cannot say just what the cause of the lesion is.

Dr. Timothy Leary of Boston says, "From the data collected, the evidence that cholesterol is the cause of atherosclerosis is as definite as the evidence that the pneumococcus is the cause of lobar pneumonia." He says, "The evidence that cholesterol is the cause of atherosclerosis is based, not only on the studies of human lesions, but on the experimental reproduction of the disease in rabbits." He says, in effect, that in the middle period of life the metabolism of the cholesterol lipoid is slowed. The new, subintimal connective tissue, which is stimulated to grow by the cholesterol lipoid, ages, secretes collagen, and becomes scar tissue. In the late period of life, cholesterol metabolism ceases, and the lipoid cells undergo nutritional necrosis, with the formation of atheromatous abscesses. Shields Warren draws attention to the tremendous increase of arteriosclerosis in diabetics treated during the decade from 1920 to 1930 with the high fat diets, rich in substances containing cholesterol, e.g., butter, cream and eggs. There was not only an increase in the disease in adults, but x-ray shadows of calcified leg arteries were obtained in children as young as four years of age. During the more recent period, under low fat diets in diabetes, adult arteriosclerosis has diminished and roentgen evidence of the disease, in children, is no longer to be had. So, inadequate cholesterol metabolism may be the principal cause. Goldzieher says, "The cholesterol disturbance in atherosclerosis, and its relationship to the changes of the adrenals, has closed the ring of evidence which seems to prove that adrenal hyper-function is among the most important factors in atherosclerosis."

Why should so many physicians die from coronary occlusion and thrombosis? Dr. S. Adolphus Knopf, of New York, says, "Perhaps it is due to the physicians' overwork, and irregular life in general, and all one can say in warning is that self-preservation is as important as the care of others."

Is there anything that we can do to prevent coronary atherosclerosis, which provides the proper soil for a coronary thrombosis to occur in? Paul White and Howard Sprague of Boston say, "Avoid diabetes and obesity. Establish healthy habits of life, in work, leisure, exercise, rest and diet. Avoid excessive worries and nervous strains. Country life, and hard physical work, and the temperate use of tobacco, appear to be of some importance in preventing the disease."

1 STEUBEN PARK.

SO-CALLED PSEUDO-ANGINA PECTORIS

Its Diagnosis and Prognosis

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FOR years there has been much written on the subject of angina pectoris because of its great importance. The very fact that so many of the members of the medical profession have been victims of this dread symptom places it in the front rank of affections deserving the greatest consideration.

Since there is a type of anginal pain that so closely simulates the true form, it behooves us as a profession to be exceedingly careful both in making a diagnosis and in giving a prognosis. It is for this reason that this paper is offered as an attempt in that direction. It will not be easy always to successfully differentiate them.

THOSE who have read Mackenzie's "Diseases of the Heart" will remember how strongly he objected to the term "pseudo-angina" because he felt that it was misleading. He stated that such a syndrome was either a true angina or

some entirely separate condition, and the two should not be confounded. He said, "It is time the term pseudo-angina pectoris was dropped out of medical literature. While it may be convenient to group under indefinite terms many conditions of whose nature we are ignorant, it should be borne in mind that this grouping is but provisional, and a confession of our ignorance of the real nature of the complaint."

As a help toward a better understanding of the nerves involved in the anginal attacks, I will quote largely from Gray's Anatomy, as there must be had some general knowledge of the nerve distribution in order that the symptomatology may be made clearer.

These attacks of pain seem to involve the brachial plexus and its branches. This plexus is formed by union of the anterior branches of the four lower cervical and first dorsal nerves. It extends from the lower side of the neck to the axilla, being very broad and presenting but little plexiform arrangement at its commencement. It is narrow opposite the clavicle, broad and presenting a more dense interlacement in the axilla, dividing opposite the coracoid process into numerous branches for supply to the upper limb.

It communicates with the cervical plexus by a branch from the fourth to the fifth nerve and with the phrenic by a branch from the fifth cervical, which joins that nerve on the anterior scalenus muscle.

The posterior thoracic branch is long in its course, extending by its root formations and branches to the side of the chest and to the lower border of the serratus magnus, which it supplies with numerous filaments.

The left phrenic nerve is longer than the right, from the inclination of the heart to the left side, and from the diaphragm being lower on this than on the opposite side. At the upper part of the thorax it crosses in front of the arch of the aorta to the root of the lung. Each nerve supplies filaments to the pericardium and pleura, and near the chest is joined by a filament from the sympathetic, and by another derived from the union of the descendens noni with the spinal nerves, which, according to Swan, occurs only on the left side. From the right nerve, one or two filaments pass to join in a small ganglion with the phrenic branch of the solar plexus.

SINCE there is such a similarity between the false and true angina, it will be well to offer some of the high lights of the latter for differential purposes.

Pain is the cardinal symptom, excruciating in type and paroxysmal, often accompanied with a sense of impending death. At first these pain attacks may be mild but they increase in severity as time passes. Any effort on the part of the patient may excite an attack. This fact soon teaches the patient to use great care, but he lives in an atmosphere of apprehension.

With the pain there is a constricting sense of oppression in the chest, suggesting possible suffocation. Following an attack there will be a state of exhaustion and nervous dread, yet with this there will be a feeling of relief to be still living.

The pain usually starts somewhere in the chest wall or near the cardiac area and radiates to the axilla and down the left arm, usually on the ulnar side. Mackenzie explains this as follows: the symptom complex called angina "belongs to a class of reflex protective phenomena, where the symptoms are evoked by a viscus reflexly stimulating certain areas in the central nervous system. The stimulus from the heart to the spinal cord irritates the nerve cells in close proximity to the nerve conveying the stimulus from the heart. The nerves thus irritated respond and exhibit the evidence of their peculiar function, that is, sensory nerves by pain felt in their peripheral distribution, and motor nerves by contraction of the muscles."

The irritable cord center makes a recurrence possible under slight provocation. Mackenzie fully believed that true angina is a sequence of myocardial insufficiency, a viscerosensory and visceromotor reflex; therefore to offer a correct therapy we must study angina from that angle.

There are other theories, perhaps unnecessary to give here in order to save space; however, one given by Kingscote of London, England, is worthy of short notice. This is given in the MEDICAL TIMES, December, 1924, in his paper,

"Cure of Angina Pectoris by Mechanical Means." He states that angina is often concurrent with fatty heart, and both are dependent mainly "on two factors, dilatation of the heart and loss of the normal negative pressure in the chest, thus allowing positive pressure and giving rise to the painful and untoward symptoms and accounting for the agony experienced by the sufferers during the attack." He further states that "The engorged heart is struggling against fixed ribs. The upper chest, owing to heart breathlessness, has become less mobile than normal, and the ribs do not retire before the struggling heart, hence the vise-like feeling."

There are atypical cases as in other conditions, but having some past experience one may be able to distinguish these. An electrocardiogram may be of service toward a diagnosis, but there are cases where no abnormality will be shown. Auscultation may demonstrate a myocardial insufficiency in many instances, and the apex impulses may be almost imperceptible. We may also find cases which have auricular fibrillation.

IN THE false type or what we may call the neuritic, the symptoms of true angina may be closely simulated, which will make for difficulty of differentiation. Fortunately, we do have distinct helps toward a diagnosis, if we will but use them. A careful review of the case history may show up some previous neuritic attacks which the patient has considered to be "rheumatic." These attacks may have affected one or both arms, but particularly the left. A careful examination will usually disclose an existing focal infection, but if no infection is found, it is likely that there is a history of one in the past.

In this neuritic type the patient will not show the marked anxiety but will be apprehensive. The cardiac symptoms will be less acute. A careful physical examination will usually fail to show any other definite heart lesion, such as myocarditis.

We must not fail to recognize, however, that these complications can be an accompaniment just the same, so one must be on guard in making a diagnosis and in giving a prognosis.

There is one distinguishing feature which will be a help. True anginal pain usually starts in the cardiac area, while the neuritic generally locates itself in the shoulder and arm, moving to the chest area. The sense of chest constriction may be present in both, but it is more severe in the true type. In neuritis we will find also that the attacks last longer and when actually over there is left a dull ache in the shoulder and arm, which is significant. One will also note that effort will not bring on an attack as it does in the true angina. Such activity will cause localized pain but not necessarily an attack.

ASIDE from these features we have the static wave current to assist us in making a diagnosis. We use this current to test just as we do to treat neuritis involving the shoulder area. We have learned that a normal nerve reacts to this current in a painless way. There will be muscle response only. If, however, there is a neuritis, the response will be painful in proportion to the involvement. The patient will quickly tell the operator that it is very painful, and, in some instances, this pain will radiate down the arm just as anginal pain does.

When the physical examination discloses no diagnostic features of an organic nature, and we find that there is a very painful response to the static wave current, we can feel fairly well assured that we are dealing with a neuritic angina and not the true type.

It is entirely within the range of possibilities that a painful response may be had in a true angina, but that would likely be because of a coincident neuritic inflammation. The writer has seen many cases with a diagnosis of true angina made by various physicians, simply from the symptoms. In some of these there have been grave prognoses given the families and in some instances to the patient also.

To my mind this is a serious matter, for a prognosis of a few weeks to live may mean serious effects when there is no true ground for such a prognosis. I feel that every case should be tested out with the static wave current, for it surely cannot do any serious harm. Some will say that this might precipitate an attack. Having tested many cases in this manner

—Continued on page 182

Clinical Notes

Relief of ANGINA PECTORIS, BRONCHIAL ASTHMA, ALCOHOLIC NEURITIS, TRAUMATIC SCIATICA, GANGRENE OF TOES, AND URETHRAL STRICTURE BY THE INTRASPINAL (SUBARACHNOID) INJECTION OF ALCOHOL.

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TYPICAL case reports have appeared in which the intraspinal (subarachnoid) injection of alcohol has been used for the relief of intractable pain of cancer and peripheral vascular diseases. It has also been used for rheumatic sciatica, meralgia paraesthetica (neuralgia of femoral cutaneous nerve), neuralgia of brachial plexus, causalgia in upper and lower extremities, pleural neuralgia (intercostal and mediastinal), lumbosacral neuralgia from chronic spondyloarthrosis, sacro-coccygeal neuralgia, pain from tabes dorsalis, aneurism of aorta, acute and chronic herpes zoster, Charcot spine, osteo-arthritis of the hip and knee joints, old fracture neck of femur, gastric and gastrojejunal ulcer, chronic subdeltoid bursitis, and painful spasms of dystonia musculorum deformans. It also has been of value in essential hypertension with hyperthyroidism, intractable hiccoughing, pruritus, and hypersensitive ureters.

This method of relief has proven safe and practical. Small quantities of absolute alcohol are injected into the subarachnoid space according to the location of the painful area, or organ to be affected. When relief occurs, it may last as long as one to three years, making it unnecessary to administer sedatives or narcotics. It relieves pain without causing complete anesthesia or muscular paralysis. A knowledge of the anatomy of the peripheral and sympathetic nervous systems is essential, as well as a thorough acquaintance with the details of the technique of injection. Complications are otherwise apt to occur.

The following reports are of new and unusual applications of this method, and give one an idea of the possibilities of this therapeutic procedure.*

Case I. Angina Pectoris

Mr. M. K., age 56, was referred to me by Dr. David Ball for a condition of status anginosis on July 3, 1936. This patient had been suffering severe anginal pains over the left side of the chest and upper extremity for about one year. His history was one typical of coronary artery disease, and his electrocardiographic studies showed unmistakable evidence of this condition. In February, 1936, the patient had been subjected to a series of paravertebral alcohol injections at an-

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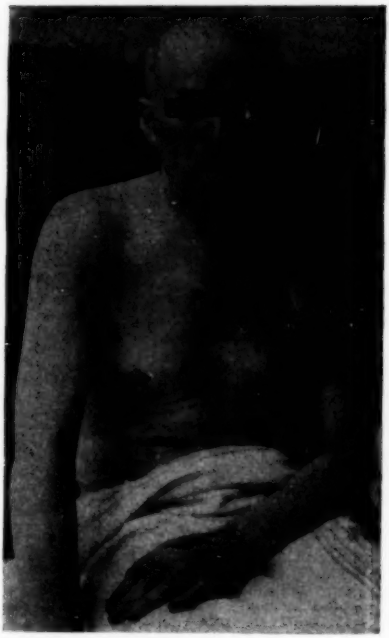
* Sterilized absolute alcohol in convenient 2 cc. ampuls was kindly furnished by Endo Products, Inc., New York City.

other hospital. Following this, his pains became aggravated, he developed a Horner's syndrome of the left eye, and a hyperesthesia of the left thoracic nerves (1 to 5 dermatomeres). When seen by me, he had a marked atrophy of the left upper extremity and pectoral region, and had been bed-ridden about six weeks. He had so much pain that it was almost impossible to touch his left hand or arm. He was getting progressively worse.



Case 1, Fig. 1

Showing the expression of pain and the marked atrophy of left upper extremity

On July 15, 1936 at the Mount Sinai Hospital, the patient was given a single intraspinal (subarachnoid) injection of alcohol. The needle was inserted between the 3rd and 4th thoracic spines with the patient lying on the right side. Clear spinal fluid was obtained upon the first attempt, and 2½ cc. were removed. Eight minims of absolute sterilized alcohol were then injected into the subarachnoid space. The injection time was one minute, no barbitage was used, and he was then kept in the lateral position for twenty minutes. The patient was then turned on his back for three hours, with elevation of the foot of the bed six inches.

Ten minutes after the injection, a diffuse area of erythema was noticed over the entire left chest. There was hypalgesia over the left 3rd and 4th thoracic segments. One hour later, there was marked perspiration over this area, and slight redness and perspiration on the right side. That evening he complained only of pain in the left shoulder region and upper extremity; he was able slightly to flex the fingers of the left hand.

The following day, he was slightly relieved, and the day after he could move his left upper extremity. He still had some pain in the left arm. On the fourth day he was so much improved that sedatives were stopped. On the fifth day, he said he was "75 per cent better," but still had some pain in his left shoulder, probably due to a partial ankylosis from disuse. He was able to use his elbow, wrist and hand much more freely. After another few days, the patient was up and around, and had free use of his left upper extremity. He has had practically no pain ever since, and has even been able to return to work. Should he ever have attacks of angina again, the injection can always be repeated.

Case II. Status Asthmaticus

Mr. L. W., age 35, was referred to me by Dr. Leopold Glushack on October 25th, 1935, complaining of severe cronchial asthma of 4½ years duration. The patient was well until 1931, when he became very dyspneic after walking up a flight of stairs. One month later, after the removal of some nasal polyps, he began to develop severe attacks of typical asthma. Three months later, his tonsils and adenoids were removed. His attacks of asthma persisted, and were becoming so progressively worse that they were not responding to adrenalin. He entered the Sydenham Hospital in a condition of collapse.

During the period of his illness, he had lost about 35 pounds. He had received the usual tests and treatments at another hospital. These included stock vaccine and autogenous vaccine injections, without improvement. His condition was thought to be due to sinus infection.

Upon examination, he revealed the typical signs of bronchial asthma, slight degree of emphysema, and many râles and rhonchi in both lungs. He was very dyspneic, pulse 120 and very weak; temperature 99.4F. There was a slight prominence of the eyeballs, widening of the palpebral fissures, but negative von Graefe and Granfrill signs. His pupils reacted to light and accommodation; his deep reflexes were normal; his heart showed no enlargement or irregularity. His Wassermann reaction was negative.

On October 27th, 1935, he was taken to the operating room, where he received an intraspinal injection of sterilized absolute alcohol. The patient was placed on his left side, and the injection of 16 minims was given between the 4th and 5th thoracic spines. Following the treatment, he immediately began to improve; his breathing became easier and his bronchial spasms and râles rapidly disappeared. He raised profuse amounts of sputum the first three days, and at the end of the week his chest was absolutely clear and he was breathing normally. He was not dyspneic, he did not cough, and he was extremely happy.

About three weeks later, the patient developed several mild attacks of pain in the right side of the face, which were relieved by codeine. Because of the inclement weather he was advised to go South, which he did for the month of February. In Florida, he had only one attack of asthma, and otherwise felt fine.

The patient returned to New York, felt well, and began to work as a dress cutter, something he had not done since his illness started in 1931. He worked through the summer of 1936, was laid off for one month because of the dull season, and then returned to work. He has been working ever since. He has had no attacks of asthma since the return from Florida, although he describes a certain tightness in his right chest which may be due to the partial hypaesthesia which still persists. His lungs now are practically clear.

He has been receiving prolonged treatments of his sinus condition, which does not seem to respond, and he thinks this makes him cough and bring up mucus. While his Horner's syndrome has completely disappeared, he still has a partial hypaesthesia over the right chest from the fourth to the sixth ribs.

This patient had remarkable relief from his spinal injection, and should have no further attacks of asthma unless his sympathetic nerves to the lungs begin to function again. The treatment can then be repeated.

Case 1, Fig. 2

Showing the site of ineffectual paravertebral injection and location (x) of intraspinal injection which gave relief.

Case III. Alcoholic Neuritis

Mr. J. A., age 45 years, was referred to me by Dr. Louis Wolfe on August 8, 1933. The patient had been a daily drinker of liquor since the age of 16, and had developed a severe case of alcoholic neuritis. When seen by me at the Lutheran Hospital of Manhattan, the patient had been bed-ridden, unable to stand or walk, for six weeks. He was suffering severe pains in all four extremities. A series of at least four intraspinal alcohol injections was planned for him.

The first injection was given with the patient on his left side. The needle was inserted between the 12th thoracic and 1st lumbar spines; 16 minims of 95 per

cent sterilized alcohol were injected into the subarachnoid space; injection time one minute. He was kept in this position for 15 minutes, and then flat on his back for 2½ hours. His right leg and foot felt better immediately after the injection. The following day he was able to get out of bed and walk around.

Two weeks later, the patient was absolutely free of *all* pain, and he was able to return to work as a traveling salesman. He has remained free of pain since then.

This complete relief of all pain following a single intraspinal alcohol injection was most spectacular, and is difficult to explain.

Case IV. Traumatic Sciatica

Mr. A. M., age 57, was referred to me by Dr. Maximilian Morgen on May 10, 1936, at Sydenham Hospital. This patient had the history of having fallen 55 feet from a scaffold where he was painting, 2½ years before. Besides developing a large ventral hernia at the site of a previous cholescystectomy wound, he ruptured his left gluteal muscles and injured his sciatic nerve and the lower end of the spine. In spite of the usual physical therapy, he persisted in having severe sciatic pain alomst continuously.

With the patient on his right side, 8 minims of sterilized absolute alcohol were injected between the 3rd and 4th lumbar spines. The injection time was one minute; he was kept in the lateral position for 15 minutes, and then on his back for three hours. The following day his pain was much relieved. He had an area of hypalgesia over the 2nd, 3rd, and 4th sacral dermatomeres. For one day he had slight difficulty in raising his left leg, and had some difficulty with his bladder and rectum, but this completely disappeared. Within three days his pains were completely gone, except for slight pain in the sole of the left foot and calf. At the end of the month he had no pains whatsoever, and was able to get around without his cane. He has remained free of pain ever since.

Case V. Gangrene of Toes

Mr. J. P., age 55, was referred to me by Dr. Nathan Rosenthal on August 9th, 1933. This patient had been suffering with a gangrenous ulceration of the left big toe and second toe due to thrombosis of the peripheral arteries, a complication of polycythemia vera. His red cell count ranged from 10 to 14 million. His pains were very severe, and it was impossible to apply any surgical dressings to his foot. The patient had been bedridden for several weeks, and had just returned from a neurological hospital where chordotomy was advised for his pain.

At the patient's home, 16 minims of sterilized 95 per cent alcohol were injected between the 11th and 12th thoracic spines, the patient lying on his right side. The injection time was three minutes; he was kept in the lateral position for 15 minutes, and then on his back with his hips elevated for 2½ hours. Immediately after the injection his big toe felt warmer and his pain was relieved. It was now possible to put pure alcohol on the open wound without hurting him.

The following day his foot looked considerably better and he was free of pain. His local condition was kept surgically clean. One week later, he was able to get out of bed and walk across the room. Several days later he developed a psychosis, probably due to cerebral thrombosis. He finally succumbed about two months later.

Case VI. Painful Urethral Stricture

Mr. E. S. L., age 56, was referred to me by Dr. Louis Wolfe on September 16th, 1936. The patient was suffering excruciating pains radiating from the rectum through the perineum and scrotum, and along the penis. The pain was due to a tight stricture of the posterior urethra. In addition, he had lues and diabetes. It was impossible for his doctor to pass urethral sounds without giving the patient a general anesthetic, and even then, the largest size passable was a number 12 F.

On September 16th, 1936, at the patient's home, 12 minims of sterilized absolute alcohol containing a small amount of methylene blue were injected between the 3rd and 4th lumbar spines, the patient lying on his right side. The injection time was 50 seconds. He was kept in the lateral position for 20 minutes, and then on his back for three

hours, with the foot of the bed slightly elevated. Immediately after the injection the patient perspired profusely over the entire left half of the body. His pain was relieved on the left side. He continued to have pain only on the right side, from the rectum to the tip of the penis.

On September 22nd, 1936, a second injection, same amount, was given at the same level, only this time with the patient lying on his opposite side. Immediately after the injection, there was a visible pilomotor response over the right loin, sacrum, and upper posterior part of the thigh, with a slight amount of perspiration. His pain on the right side was only 50 per cent relieved, and therefore a third injection was given on October 6th, 1936, between the 2nd and 3rd lumbar spines. Fourteen minims of sterilized absolute alcohol with methylene blue were given, with the patient again on the left side. He immediately perspired profusely over the right side of the trunk, and a marked pilomotor response was visible.

Following the third injection, his pain was completely relieved, and narcotics became unnecessary. He was slightly constipated and, due to the urethral anesthesia, he developed a bladder incontinence which was to be expected. Being relieved of his pains, he was now able to leave his bed, after having been confined for several months. His doctor was now able to pass sounds without causing any pain, and without any anesthetic whatsoever. Within two weeks after the last injection, a number 26 sound was passed without difficulty. While he has been inconvenienced by the necessity for wearing a urinal bag, his pains are completely relieved. The patient is now gradually regaining control of his urinary sphincters. He should remain free of pain for at least a year, and possibly longer.

Summary

1. Disorders of the sympathetic nervous system as well as intractable painful conditions are amenable to relief by the intraspinal (subarachnoid) injection of alcohol.

2. The method is a safe, practical, painless and non-shocking procedure when done properly. Severe complications may follow if done improperly, or by the inexperienced.

3. Case reports of six unusual applications of this method are given, with remarkable relief in each case.

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1. The reader is referred to a complete bibliography on this subject in the author's publications, particularly the following:

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(e) *Idem.* The intraspinal (subarachnoid) injection of alcohol for the relief of pain and for sympathetic nervous system disorders. *Med. Record*, 143:327-331 (April 15, 1936.
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(h) *Idem.* Chronic painful conditions amenable to relief by the intraspinal (subarachnoid) injection of alcohol. *Am. Jour. Surg.* (May) 1937.
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1 East 79th Street.

SO-CALLED PSEUDO-ANGINA PECTORIS

William Martin, M.D.

—Continued from page 177

I have failed to find one so affected. The very fact that it offers a better prognosis makes for its value. Several typical cases could be given to prove this, but space forbids.

MY PARTING word is that the physician should take every care in his power to avoid giving a grave prognosis until he is fully assured that his diagnosis is correct. Even then he should be guarded, for no one can feel that one is always right.

Ambassador Hotel.

A REPORT OF TWO CASES OF DISORDERED AURICULAR MECHANISM TREATED WITH *Quinidine*

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TWO cases belonging to essentially the same fundamental disorder in auricular mechanism are presented. One is a case of auricular flutter, the other, of auricular fibrillation. They are presented because they illustrate specific problems in quinidine therapy. There is no intention here to discuss the essential mechanism of these disorders. It is accepted, for the purpose of this presentation, that in auricular fibrillation and flutter the basic mechanism is the so-called "circus movement"; namely, that the auricles are activated by a self-perpetuating excitation wave traveling in a closed circuit which presumably leads to a physiologic alteration in the auricular muscle resulting in decreased refractoriness. This decreased refractoriness of the auricular musculature is the essential factor which favors the mechanism of circus movement. Furthermore, it is accepted that quinidine possesses the property of increasing the refractory phase of the auricular musculature and that, therefore, it tends to antagonize the essential factor which produces the circus movement. If effectual in its antagonistic action, quinidine may, and often does, completely interrupt this mechanism and permit the restoration of the normal cardiac rhythm.

Among the prerequisites to successful quinidine therapy, a proper choice of cases is of first importance. The cases that follow are intended to emphasize this point.

Case I. A white female, 46 years old, was admitted to the hospital on September 21st, 1936, complaining of attacks of weakness, palpitation, dyspnea and tingling over the precordium, off and on for three months. She has been subject to recurrent attacks of mild polyarthritis for several years. One attack seven years ago was diagnosed as an acute rheumatism. She has had spells of palpitation at irregular intervals over a period of ten years. On several occasions during the past two or three years, she has had signs of impending circulatory failure such as swelling and tenderness of the liver and mild dependent edema. The present attack followed a head cold two weeks prior to admission. Her original attack three months prior to admission also came in the wake of an upper respiratory infection. At that time she was given bed rest, digitalis and quinidine, to which the cardiac mechanism responded. That is, the flutter disappeared but returned again in a few days. For several weeks prior to her admission, she had been receiving 1 grain of phenobarbital and 3 grains of digitalis a day without apparent improvement. She had a natural menopause one year ago. The past history was otherwise irrelevant. The family history was essentially negative.

Physical examination revealed a well developed, rather obese, white female lying quietly in bed and not acutely ill. The lungs were clear. The blood pressure was 144/110. The heart was of normal size, but had a somewhat irregular rhythm. The rate was 115. There was a presystolic thrill palpable over the precordium, and a systolic murmur and a presystolic rumble were heard at the apex. There was no dependent edema or hepatic or pulmonary congestion.

She was admitted for observation and study. On admission, a diagnosis of rheumatic mitral stenosis with an auricular flutter was made by the attending physician. In the hospital, the diagnosis was confirmed by an electrocardiogram which showed an irregular ventricular

From the New York Polyclinic Hospital.
Read before the New York Polyclinic Clinical Society on January 4, 1937.

response to an auricular mechanism resembling impure flutter.

Because the patient had had auricular flutter without heart failure only about 3 months, prior to which she had a normal sinus rate of 75-80; furthermore, because she had had quinidine in the past and tolerated it well, she was considered a suitable case for quinidine therapy. This treatment was instituted in the hope of restoring a normal sinus rhythm. She received 3 grs. of quinidine sulphate 5 times a day. Two days later, after having received 27 grs. of the drug, she returned to a regular rhythm with a pulse rate of 78. Her pulse rate then ranged between 60-78 and her symptoms were alleviated. She was put on a maintenance dose of quinidine (1.5 grs. 4 times a day) and was then discharged from the hospital on October 4th, 1936.

Follow-up reveals that up to date—3 months later—she has retained a normal sinus rhythm. She continued her maintenance dose of quinidine for two months after leaving the hospital. At present she has no cardiovascular symptoms. Since leaving the hospital, she has complained of weakness, nervousness, and an occasional sweat with flushes. For these symptoms, which were interpreted as signs of the menopause, she is being treated with female sex hormones.

Case II. A white female, 56 years old, was admitted to the hospital on October 13th, 1936, complaining of attacks of palpitation and nervousness and with irregular heart action for two months. She dates her symptoms to an attack of severe pain in the right axilla, radiating to the right shoulder blade and the right loin. This was subsequently diagnosed as herpes zoster. Six weeks before admission, she had an attack of pain which she located in the breasts and upper abdomen. An electrocardiogram at that time showed auricular fibrillation. After treatment another record, taken one week later, showed a normal sinus rhythm. From the patient's story, it seems that she was given quinidine but her palpitation promptly reappeared in spite of the drug. There was a history of considerable loss of weight.

Physical examination revealed a fairly well developed and nourished white middle-aged female, nervous, but not acutely ill and lying comfortably in bed. At times she would perspire freely.

Essential findings: Blood pressure 182/80, pulse 80, respirations 24. There were occasional râles in the right chest, posteriorly. The heart was of normal size to percussion. Volume, rhythm, and quality of the precordial pulse were irregularly irregular. There was a pulse deficit of 30 plus. On palpation, the heart beat was diffuse, spreading throughout the precordium ith a precordial heave. There were epigastric pulsations and pulsating vessels in the neck.

The admission diagnosis was arterial hypertension, cardiac hypertrophy, auricular fibrillation, extrasystoles, and mild circulatory insufficiency.

An electrocardiogram showed auricular fibrillation, ventricular extrasystoles, and left axis deviation.

The patient was placed on limited fluids, phenobarbital and a diuretic for one week.

By that time, the blood pressure had dropped to 150/70, pulse rate was 80, but the heart was still totally irregular. There was no evidence of circulatory failure and the general condition was good. Quinidine therapy was instituted with the hope of restoring a normal sinus rhythm. She was given 3 grs. of quinidine sulphate every two hours for three doses to test her tolerance, and then 6 grs. every 2 hours for seven doses. On the third day, after receiving a total of 57 grs., she returned to a regular rhythm with a heart rate of 76 a minute. The blood pressure was 148/70.

Two days after the normal rhythm had been restored, the blood pressure suddenly rose to 204/94 and the patient began to complain of headache and palpitation again.

Because of the transitory hypertension, recent fibrillation and symptoms such as sweating, nervousness, weakness and loss of weight, a basal metabolism was taken. It was reported plus 35 and a hyperthyroid state was assumed. Lugol's solution and sedatives were then added to the therapy.

About one week later an electrocardiogram showed the auricular fibrillation had returned in spite of a maintenance dose of quinidine. The pulse rate was then ranging 84-86, blood pressure 158/76

— *Continued on page 207*

MENTAL HYGIENE NOTES

I

THE PROBLEM OF THE CHRONIC ALCOHOLIC

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THE rôle of alcoholism as a great social problem has long been recognized, as evidenced by the varied and unsuccesful attempts of numerous governments to cope adequately with the problem. The importance of this subject is further emphasized by the fact that alcoholic psychoses form the fourth to sixth largest group of admissions to our State Hospitals. In addition, cases are admitted which are complicated by alcohol directly or indirectly, and are placed under their true diagnosis. One must also take into account the large number of alcoholics who do not reach the stage where it is necessary to commit them, but who at the same time present an irritating and perplexing problem to their families and to the community. Many come to the State Hospitals for an acute psychosis which is short-lived, and then a new question arises as to their further treatment and ultimate prognosis. Hospital physicians are impressed time after time with the initial enthusiasm with which these patients cooperate in their early treatment, and the sincerity with which they pledge themselves to total abstinence when released from the hospital. How rare, indeed, is the patient who really carries out his promise! These pledges are broken so often that one now misses the sense of acute disappointment at the futility of past treatment and becomes resigned to have these patients brought back again to the hospital with the same original problem of what to do with them. This occurs with such regularity that when such a patient promises, with a great show of sincerity and conviction, to abstain totally and rigidly in the future from the use of alcohol, his reply is met with a secret but firm sense of disbelief, or with marked skepticism.

One is forced, then, to probe more deeply to discover why such patients cannot adapt themselves readily outside the hospitals, when they usually get along so well, after the acute psychosis, in the sheltered confines of the hospital. One would be apt to parole them early, except that experience has shown that the patient will be soon returned with the same psychiatric problem unless kept in the hospital for a long time, away from temptation, and given an opportunity to adopt new interests and hobbies.

We soon come to realize that an alcoholic individual represents a poorly integrated personality, who was inadequately adjusted before his alcoholism became evident. Indeed, alcoholism is often only a symptom of a mental disorder in a latent state, and not the disorder itself. As a result, the tendency more recently has been to diagnose a great many of them, with this in mind, as cases of dementia precox, manic-depressive psychosis or general paralysis —to mention the more common disorders —depending on the symptoms exhibited. As Branthwaite has aptly remarked, "They are not insane as a result of the alcohol—but alcoholism was only the herald—the only obvious sign of an impending mental disorder." Intolerance to small quantities of alcohol may be considered as a fairly certain sign of impaired mental equilibrium in those who inherit a lack of control, making it easier for them to divorce themselves from reality. Inhibitions are removed, and they can now indulge in their instinctive cravings without due regard to conventional barriers, against which they have struggled all their lives with only partial success. This is true, especially, in the psychosexual fields. But, not only is the individual responsible for his faulty adjustment, but some blame must be attached to his poor heritage. Direct tainting with alcoholism is found twice as

often in the parents of the insane as in the sane. Alcoholism must thus be regarded as an evidence of an unstable disposition. As Mott states, "Like may not beget like in this respect, but a tendency to an inherited weak will power and moral sense may be transmitted to the individual whereby he is more susceptible to imitation and temptation." Thus alcoholism in the majority of cases may be considered as a precipitating agent to force into maturity in a predisposed individual a mental disorder already latent there, and freed with varying ease when his libido is allowed to regress to lower levels by either mild or excessive drinking.

The problem of treatment is thus made evident. By the time the individual has shown enough abnormalities to send him to a hospital, it may be too late adequately to save a personality shattered by a series of frequent maladjustments. Our chief point of attack lies in treatment in childhood or adolescence, when such poor adjustments first become mildly demonstrated. In such prompt early advice, guidance, and recognition of the fact that alcoholism is a symptom of a chronically maladjusted, unstable personality, lies our only hope of its amelioration.

II

THE PUBLIC AND MENTAL HOSPITALS

THOUGH the treatment of the mentally sick has rapidly improved in the past fifty years from the previous era of chains, handcuffs, hobbles and similar methods of restraint to the present period of greater understanding, coupled with human interest and less and less restraint, the public, as a whole, is still unaware of the true picture that our mental hospitals today exhibit. The writer has been impressed by this, time after time, when conducting clinics for visiting classes of nurses or pre-medical students, when someone suddenly toward the end of the lecture bursts out with the question, "But Doctor, where do you keep the really wild ones?"

This ignorance of modern progress in the treatment of mental diseases is very unfortunate, when it is realized that these people supposedly comprise the more intelligent of our communities, and also are possessed of a greater fund of knowledge of general medicine than the average individual. Visitors or relatives of patients calling at the hospital are very frequently impressed by the efficient, orderly manner in which our modern State Hospital functions. In fact, they are often disappointed not to see the conditions which they anticipated, having previously had their minds influenced by reading popular fiction or by the cinema. They are surprised at the general air of efficiency and by the good behavior of the majority of the patients, to such an extent that the question is very frequently asked, "Why are so many apparently normal patients confined unjustly"? This thought is actuated by the generally orderly state of the wards and patients, who apparently are quiet and behaving themselves in a normal fashion. They have been taught to believe that psychotic patients are constantly "wild", exhibiting foolish mannerisms or shouting silly, nonsensical remarks.

The need for propaganda in this field is great. The public should be made to realize that mental disorders constitute an exaggeration in degree of the normal cyclic human behavior to one extreme or the other, and that, "like so-called normal human beings", the conduct of those affected by them varies from day to day —that is, they have their good days and bad ones; also that many of them in the sheltered, protected confines of the hospital feel themselves secure against the fears of reality and the conflicts and problems met constantly in the outside world. In addition, many suffering from imaginary persecutions deem themselves securely protected by the solid brick walls of the hospital, and the general air of efficiency of the nurses and attendants.

Emphasis should be placed upon the fact that modern mental hospitals today function very much in the same manner as general hospitals, and are ready to

treat the physical as well as the mental illnesses of our patients. How surprised visitors are to see the well kept, orderly wards, the up-to-date operating rooms, the x-ray equipment and facilities for dental, ear, nose, throat and general care that are at hand to provide for the welfare of their inmates. How many then remark that "The mental hospital looks like a modern general hospital, especially in its ability to handle the same general complaints and physical ills that the human race is subject to."

Hospital physicians have all been impressed with the change in attitude of relatives from one of shame, humiliation, and depression, to one of cooperation, hope and contentment, when, after visiting the hospital, they find that their loved ones are comfortable and obtaining the very best of up-to-date psychiatric and general medical care. They see patients walking about contented and happy, rapidly approaching normality. They then become imbued with the thought that mental diseases are a systemic, general medical problem, amenable to treatment in the same way as the ordinary diseases met every day. They have impressed upon them that mental diseases are not an entirely separate entity, but constitute a portion of general medicine, just the same as diseases of the lungs, heart or kidneys. Pictures such as "Private Worlds" have done a great deal to open the eyes of the public to a true realization of the modern treatment of the mentally ill.

Finally, the need for education of the public in these fields is again stressed. They must be taught that the administration and efficiency of the mental institution has steadily improved and that a great attempt has successfully been made to approach general hospitals in medical equipment and management. An effort must be made to develop in the public mind the curative aspects of mental diseases and to abolish the still persistent ideas of inhuman restraint and multitudinous "padded cells, crowded with wild, raving maniacs, under the most unhygienic conditions, and subject to brutal treatment by savage attendants." The modern system pays most heed to the individual and the need for humanizing interests, allowing a greater share of personal liberty than was formerly believed possible. The various entertainments, such as dances, cinema, physical training including sports, and occupational therapy classes, as well as the craft shops, help further to develop this attitude. 1600 South Avenue.

CONSTRICTION RING DYSTOCIA

Louis Rudolph, Chicago (*Journal A. M. A.*, Feb. 13, 1937), believes that the clinical importance of intra-uterine rings complicating labor is not sufficiently appreciated. This condition, which causes dystocia, is chiefly functional and has been designated by at least twenty different terms. The assumption that intra-uterine rings are due solely to the contraction ring of Bandl, the contraction ring of Schroeder or the retraction ring of Barbour and Lusk is not tenable, in view of the different uterine levels at which they are found. The designation of this dystocia as a constriction ring dystocia is based on biologic grounds. A review of 350 reported cases and twenty-one in the author's experience, demonstrates that a conservative management with delivery by vagina is the safest for the mother and child. Intra-uterine rings frequently complicate prolonged labors. The diagnosis is either speculative or absolute. The criterion of an absolute diagnosis consists of a prolonged labor, no change in the station of the presenting part in the second stage of labor, looseness of the fetal head in the pelvic cavity, relaxed cervix during a uterine contraction, and intra-uterine palpation of the constriction ring. The majority of constriction rings are found behind the symphysis pubis and from about 6 to 8 cm. above the external os. The management of a prolonged labor should consist in the prevention of maternal exhaustion by a sufficient intake of food, water and rest for each twenty-four hours of the labor. A negative acetone is the criterion of a well-managed parturient. The conservative management bespeaks no operative intervention until the constriction ring has relaxed, leaving out indications that may point to intervention for either mother or child. A conservative management should result in a maternal mortality of less than 2 per cent and a fetal mortality of less than 15 per cent.

Economics

Department Edited by Thomas A. McGoldrick, M.D., LL.D.

SICKNESS INSURANCE SUSTAINS BAD PUNCTURE AT THE HANDS OF ITS FRIENDS

IN HIS report of the Works Progress Administration (Government Aid During the Depression to Professional, Technical and Other Service Workers, 1936, p.4), Harry L. Hopkins says that "The group of professional and technical workers was about 82,000 in number and included over 20,000 teachers, 15,000 musicians and music teachers, 6,800 nurses, 6,200 engineers, 4,500 draftsmen, 3,800 actors, 3,000 clergymen and religious workers, 2,900 artists, 800 chemists, assayists and metallurgists, 1,400 reporters and editors and 675 physicians, surgeons and dentists."

In view of the fact that one of the arguments for sickness insurance and state medicine puts forward economic security for the physician akin to that of the teacher, Hopkins' report makes clear the delusory character of that kind of reasoning. Such evidence must give Hopkins himself a headache. The medical profession is right in sticking to the position that any change in its service to the public must be judged by the effect of such a change on the quality of service.

Teaching is a public function and those who engage in it should be secure against disaster if there were any validity to the argument that their public function safeguards their position in the educational scheme of things.

●

THE DOCTOR OF TOMORROW

By DWIGHT ANDERSON, Director Public Relations Bureau, Medical Society of the State of New York

THE Doctor of Today has been summoned before the court of public opinion. He is accused of failure to make his services available to all the people who need them. It is alleged that he is indifferent to the sufferings of those who are deprived of medical care because they are unable to pay for it. Government-controlled health insurance is to bring together the impoverished sick and the idle doctors.

It is an historic scene we are witnessing. On the issue of the trial of the Doctor of Today will depend the fate of the Doctor of Tomorrow. In this connection the words of Schiller come to mind: "For in today already walks tomorrow." In the past centuries of the doctor's tradition, as he struggled to make a scientific art out of a superstitious necromancy, no such charge was ever lodged against him. Not until we reach the present age, in the plenitude of a civilization surfeited with too much of everything, do we find him accused of not giving enough, of withholding his services. So now he comes to trial.

I am going to try to picture the scene on this occasion assuming that I have been selected to act as the doctor's advocate. The jury consists of six men and six women. Some of them have been patients of the doctor. Two were so poor they could pay for nothing, and the doctor took care of them free. Two of them could pay him, but have not. Two others

Read before the 116th annual meeting of the Medical Society of the County of Monroe, Rochester, N. Y., December 15, 1936.

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do not believe in doctors and are a little bored to have to serve on the case. The remaining six have been patients at one time or another. All are typical American citizens: a chauffeur, a silk merchant, a lawyer, a college professor, a clerk, a retired business man, and among the women, a stenographer, a milliner, a telephone operator, a burlesque strip dancer, a club-woman, and a housewife.

The jury has heard the testimony. There were four witnesses: a social worker, a sociologist, a professional uplifter and a politician. It could be seen that the evidence they presented, though it was mainly hearsay, produced a profound emotional effect upon the jury. The witnesses were apparently disinterested. They made strong claims in behalf of the underprivileged, alleging that women everywhere were dying for lack of medical care while the doctor sat idly twirling his thumbs in his office. They pictured children suffering from disease and defects while the doctor spent his idle time on a golf course, careless of their suffering.

THE prosecution's case was well presented because it was heavily financed. Contributions had been made by a few large employers of labor who wished to give their employees cheap medical care instead of higher wages. Pressure had been brought to bear by politicians convinced that nothing in the country was conducted as well as they could run it if given a chance. Thousands of jobs and millions in perquisites were to be the prize if they could get the doctor under their control. His occupation, economically, rated as the third in magnitude in the land.

So the thing the jury was called upon to decide was whether the doctor was to be forced to work for the politician under a system of health insurance conducted by the state and paid for by contributions from the state augmented by a sickness tax levied on the employee and the employer.

In his defense the doctor summoned, for the most part, other doctors. They were men of the highest standing in their profession. But it was easy to see that the jury was unconvinced, that they regarded this testimony as self-serving. Only one non-medical witness, J. Weston Walch, a school teacher, went ON THE WITNESS STAND in a pamphlet which he wrote with that title. The jury paid close attention to what was said by this unbiased student.

In rebuttal, the prosecution called a physician who had spent most of his life in academic work, far from the actual practice of his profession. He presented the problem not in terms of actual human behavior as the plan would work out in practice but in the form of figures, charts, and designs on a sheet of paper. Nevertheless, his testimony weighed heavily with the jury who knew nothing of the elemental human values of confidence and trust which contribute to the success or failure of the therapeutic relationship.

So it is at this juncture that the case is closed and the time comes in the course of things for the doctor's advocate to rise in his place and address the jury.

And were I to be his advocate I should argue like this in the court of public opinion:

"You see before you here today a man not to be judged as other men are judged. His habits of life have led him to tincture his idealism with realism. He is a man addicted to facts. He has mistakenly thought, until now, that his best arguments would be the universal knowledge of the millions whom he has served without charge, the discoveries he has perfected and given without pay to the world, the efforts he has made to discipline himself and his brothers to the highest perfection of which they are capable. He has not thought the issue would be decided by the contestant who could shout the loudest. So he appears here unprepared. In fact, it was not until the last moment before the case was called, that he bethought himself to find an advocate.

"In his defense you have heard evidence that in countries where this scheme has been in operation vital statistics fail to show health conditions as good as in our own land, the healthiest in the world. But the answer comes that the plan might work better in this country than in England or Germany. We asked and failed to get an answer, whether government here had proved itself able to administer affairs even as well as in those European countries where health insurance has dismally failed to produce conditions as favorable as already exist in America.

The substance of the doctor's defense is that he cannot do his best work under health insurance, whose incentives and rewards will be alien to the attainment of excellence. The doctor submits that doing less than his best will effect a gradual deterioration of his character, lowering the quality of medical service. Obviously nobody wants this. Here, then, is a sharp conflict of opinion. The witnesses on the other side, who are not doctors, can see no reason why this should be so. We contend that if they were doctors they could see it. On this clear-cut issue you are forced to decide which view is most likely to be right.

"Now I ask you to decide that the doctor is most likely to be right because of all that you know about him. Certainly he has the best reason to be right, spending his life in the care of the sick. You see him constantly trying to eliminate the causes of disease, knowing full well that the greater his success the less will be the demand and the pay for his services. Now if his opposition were affected by his financial interest would not this grasping attitude be reflected in other things that he does? Would he not patent his discoveries and sell them at a high price? Would he not demand pay in advance everywhere he goes? Having the power to heal, and having, at the moment of greatest suffering and anxiety, when he is first called, the opportunity to exploit the sick, why does he not do so, if he is the type of man to think first of his own selfish interest? If money alone were his aim would he spend it for postgraduate education to better discipline himself to serve you? Would he advocate always those measures, in the profession and out of it, which make it more difficult to become and to remain a doctor, to the end that the bungler, the incompetent, and the mercenary may not impose on the credulity of the sick under the sanction of the superiority which the title of physician gives him? Yes, there is self-interest here, of the sort that is contained in the struggle for perfection, but it is the kind of self-interest which protects the public more than it protects the doctor.

"When your life is in danger through sickness you place your entire being unreservedly in his hands with full confidence in his ability. Don't you think he is worthy of trust in deciding this matter? Don't you think he *must* know, better than any one else, when he says that this scheme will make it impossible for him to render you full service, impossible for him to continue to be as worthy of your confidence as he is now? Who knows any better than he does, what will happen to him, and by the same token, what will happen to you? Certainly none of the other witnesses you have heard are likely to know so well. They cannot see the situation as realistically as he does because they are not men actively engaged in giving medical care to people.

"THIS is a bauble gift which is offered you. It will vanish at the touch. There is no substance in it. It is part of the corrupting psychology of the day that we can get something for nothing; that life can be made easier than Nature intended it to be. Few have the courage to say with Cassius, 'The fault, dear Brutus, is not in our stars, but in ourselves, that we are underlings.' During the difficult recent years the ego of the crowd has been unable to bear the knowledge of its incapacity to walk on its own feet, and so there must be scapegoats. The demagogue began to feed the crowd the flattery which it has loved to hear throughout all ages of history. The people were given *'panem et circenses.'* The mob was fired with zeal to find, and to punish, those who had brought about their confusion and despair. Now, today, in this forum of public opinion, the doctor is the last of these scapegoats to be put into the dock. If you decide against him, it will not be the first time that the world has turned against its real benefactors.

"You have been told that many are without medical care, but you have not been told how many. The statistician who testified showed you figures that more than ninety per cent of the people who were questioned in a survey covering a certain year were able to obtain medical care. Yet the statistician did nothing to find out why less than ten percent went without it. That question was not asked. There is no evidence before you whatever that any one *seeking* medical care was denied it.

"Members of the jury, you cannot be healed unless you seek to be healed. A system of medical care cannot be forced upon you to good purpose. It cannot be,

and it should not be, brought to you without effort or sacrifice on your part. Its acceptance by you will be measured by the value which you put upon it, and having given little, you will receive little. This is a law which cannot be escaped. It is with the illness of the flesh as with that of the spirit: 'Seek and ye shall find.'

"Ladies and gentlemen of the jury, the fate of the doctor is in your hands. You can make him master of his house, or servant in the house of another. But whether he be master or servant he will still try to heal the sick, for such is his nature, different than that of other men. Healing has been his chief concern since the early dawn of recorded history. It is his chief concern today. It will be his chief concern tomorrow. Take his tools away and still he will seek to heal the sick. Relax his disciplines, and still he will seek to heal the sick. Put over him a clerk to dictate his prescriptions, a supervisor to interfere with his diagnosis, he will yet attempt to heal the sick. History recounts that the long list of physicians who ranked high in favor of the public for achievements in other walks of life were doctors first, and second they might be governors, as John Winthrop of Connecticut, or William Bull of South Carolina; or soldiers, as Leonard Wood, Walter Reed, and William C. Gorgas; members of the Continental Congress and a signer of the Declaration of Independence as Benjamin Rush; authors as Oliver Wendell Holmes and S. Weir Mitchell; an etcher as Sir Seymour Haden, or a social reformer as Rudolph Virchow; and still their first concern has been the healing of the sick.

"IN the second century many a great Roman relied upon the good offices of a medical slave, and though the Doctor of Tomorrow become your slave he will be healing you. In the darkness of the Middle Ages, with his skill taken from him in ways different from, but in effect similar to, what you are asked to do to him now, nevertheless, he tried to heal the sick. We find him as Guy de Chauliac, chaplain and physician to three popes in the fourteenth century; we find him as François Rabelais in the fifteenth century, author and physician; later in the seventeenth we find him as Thomas Sydenham, a puritan captain of horse in the Civil Wars, but his first concern was to heal the sick. In our own time, Sun Yat Sen and Georges Clemenceau offer plenty of proof that the physician, drawn aside to other paths in life, retains a native instinct to bind up the wounds which society inflicts upon itself, even when the wounds are sustained in contests against such wise leadership as the physician himself represents.

"Perhaps the doctor is now to pay the penalty which often is exacted of the honest man. It is said that 'Glad are the feet of him who brings good tidings.' But the doctor recognizes the charlatan in many an optimist. The doctor knows that sickness, accident, and death must come to all of us. He knows that he who seeks to moderate the cruelty of these ills must work hard for this accomplishment. He knows that life is meant to be difficult, that rewards are meant to have their price, that things ought not to be made to seem easier than they really are. He has had the courage to tell you this, in the very teeth of the quack who would make you think that you are underprivileged. He knows that nature has been working for millions of years to make man fit to pay a great price to insure his own existence, and that the best health insurance that can ever be obtained is that which comes individually by struggling to get it. The doctor knows, and he has said, that mankind cannot rely for self-improvement upon mere legislation put into operation by a beneficent government. The doctor knows that the man of yesterday, today, and tomorrow is lost who depends for his salvation on giving less to society in order to get more. His advice has been frequently unpleasant, his instructions often entailed personal effort and self-denial, his warnings on occasion have been ominous. His feet were not always glad.

"He has had the courage to tell you these things in the face of the popular clamor that some mysterious force has stolen your birthright, which the *magi* will now return to you.

"He has had the courage to tell you these things because they are the truth. Ever he has sought the truth about life and death. He is different than other men. He is not to be judged by the stand-

ards of other men. He will not bring you good tidings for the pleasure of seeing your faces beam with pleasure, unless they are true tidings. For he knows that this is only to pander to a worse ailment than any we are trying to remedy, inducing false hopes which can be cured only by the ultimate tragedy of disillusionment. As is his way, he has told you the truth, that life is hard, the way to the hilltop long and steep and difficult. For his plain speaking it is possible that you may condemn him, for he has been condemned by others before because he did not applaud ignorant altruism, change which was not progress.

"But no matter what you do to him, he heals the sick today and will still heal them tomorrow. 'For in today already walks tomorrow.' Under socialism, dictatorship, monarchy, despotism, or democracy, still he will heal the sick, as best he can. If you try to pluck him by the arm, he will pull himself away to keep on in the path he has chosen, though it now be a tortuous one, for he is not as other men are, easily persuaded. You may call after him: 'But here is a different way for you to be paid, so you can make more money and heal more people.' His reply will be: 'Do not hinder me. What do you mean, 'more people?' My hands are full; day and night I care for those who come to me, who need me most and prove it by the act of seeking me. My time belongs to them, not to others who through indifference or ignorance may have no faith in me, though I run after them. I am too busy to experiment with plans and schemes. I must heal the sick.'

"Whatever you do to the doctor you can not divest him of this privilege, responsibility, and prerogative, which, at long last, is what matters most to him and to you.

"So now I leave with you, members of the jury, the fate of the accused. Do with him as you will. Do with him as you must, under the law and the evidence; remember, as you consider your verdict, that it will be as momentous a decision for you as it will be for him; remembering that he brought you into the world and helped to keep you here."

* * *

Thus might the doctor's advocate present his defense at the bar of public opinion.

We all await the verdict.

GONADOTROPIC HORMONE IN DIAGNOSIS OF CHORIONEPITHELIOMA

In the pathologic placenta (hydatidiform mole, chorionepithelioma), according to BERNARD ZONDEK, Jerusalem, Palestine (*Journal A. M. A.*, Feb. 20, 1937), the production and excretion of gonadotropic substance may be immensely increased. The hormone appears in greatly increased amounts in the blood, urine and spinal fluid. A diagnosis of hydatidiform mole cannot be considered as established unless, in repeatedly performed examinations, at least 200,000 mouse units of luteinizing principle is found in the urine and, in addition, a positive luteinizing reaction is obtained from the spinal fluid, preferably diluted. It is necessary to rule out toxemia of pregnancy, as in this condition the luteinizing substance is also excreted in the urine. However, only a follicle-stimulating effect is obtained in spinal fluid. If the pregnancy test still remains positive six weeks after the discharge of a hydatidiform mole and if the content of gonadotropic substance in the urine has increased progressively, it suggests a diagnosis of chorionepithelioma, particularly if a positive reaction is also found in the spinal fluid. For confirmation of the diagnosis, exploratory curettage is necessary. When the pregnancy test has become negative after the discharge of the hydratidiform mole and then becomes positive after some time there is either a new pregnancy or a chorionepithelioma. The assay of urine for gonadotropic substance is of importance not only for diagnosis but also for prognosis in chorionepithelioma. If the pregnancy test has become negative following therapeutic measures and if luteinizing substance occurs once more in the urine, this indicates that the malignant process is proceeding. Apparent clinical improvement may often be deceiving in such cases. A considerable reduction in excretion of follicle-stimulating hormone occurring suddenly without therapeutic measures is clinically a threatening sign, although when this occurs following therapy it is usually considered a favorable sign. The

Cancer

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REPORT OF CASES OF TEN YEAR CURES OF CANCER from the HOSPITALS OF ROCHESTER

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IN 1925, the New York State Committee of the American Society for the Control of Cancer voted to undertake a continuous educational program, directed principally towards familiarizing the laity with the early signs of pathological changes that, in the course of time, if allowed to persist, might develop into cancer.

We soon were able to prove that an opinion which we thought was common was definitely prevalent, not only among laymen but also among many physicians: namely, that cancer is incurable. In medical literature there are many reports which show that cancer is curable, if it is discovered before metastasis has occurred, and many general statements like that of Clark (*Progressive Med.*, June, 1926: 201):

"Any one familiar with hospital or private medical and surgical experience knows full well that thousands and tens of thousands of persons who have been operated upon for cancer are alive and well today. It is regrettable that the collective experience in this respect should not have long since been brought together as an unanswerable argument of the dictum that in the earliest qualified treatment lies the only hope of cure."

The Committee felt that it ought to be able to collect evidence that would be competent to show that such general statements could be substantiated; consequently at its sixth annual meeting, held at the Rochester General Hospital, in 1930, a beginning was made by presenting a report of cases of cancer treated in the six general hospitals in the city, in which the patients were known to be living and without recurrence for five years.

Each hospital staff was asked to nominate one of its members to search the records and determine the number of patients that had remained well for that period of time. The list was sent to the Executive Secretary of the Committee. Then a committee of three pathologists, one from each of three hospitals, was asked to examine the microscopic slides of the growths. If this committee unanimously confirmed the diagnosis, the case was taken up in the list of five year cures. If one of the pathologists questioned a histological diagnosis, that case was excluded. Subsequent follow-up was the task of the Executive Secretary.

At the meeting held in 1930 at the Rochester General Hospital forty-three cases of five year cures of carcinoma were reported; fifteen of the breast, five

Presented at the Twelfth Annual Meeting of the New York State Committee of the American Society for the Control of Cancer, held at the Genesee Hospital, December 8, 1936.

of the cervix, two of the fundus, three of the ovary, two of the penis, seven of the gastro-intestinal tract, and nine in a miscellaneous group.

We were able to report in 1935 that there were twenty-three of these patients living and without recurrence ten years after treatment; 53.4 per cent. (Tables I and II). Seven were known to have died of cancer; 16.2 per cent. Five died of other diseases; 11.6 per cent. Eight were lost; 18.6 per cent. If we assume that those patients that we were unable to trace also died of cancer, an assumption which is not necessarily correct, 39.3 per cent have died of delayed metastasis.

Of the cases of cancer of the breast still living in 1935, one, a patient of Dr. Dean, had pernicious anemia, controlled by the use of liver extract; but without evidence of recurrence of the cancer. Another, a patient of Dr. Fowler, had an epidermoid cancer of the cervix treated in 1934. This patient had no evidence of recurrence of either growth.

Table I

CASES OF CANCER LIVING WITHOUT RECURRENCE TEN YEARS AFTER TREATMENT

Treated in 1925—Reported in 1930

	Cases to be accounted for	Living	DEAD Of Cancer	DEAD Of Other Diseases	Lost
Carcinoma of the Breast ...	15	5	3	3	4
Carcinoma of the Cervix ...	5	2	1	2	
Carcinoma of the Body of the Uterus	2	1			1
Carcinoma and Sarcoma of the Ovary	3	2			1
Carcinoma of the Male Genito-urinary Organs	4	2	1		1
Miscellaneous Group	7	5	1		1
Carcinoma of the Gastro-intestinal Tract	7	6	1		
	43	23	7	5	8

Table II

CASES OF CANCER LIVING WITHOUT RECURRENCE TEN YEARS AFTER TREATMENT

Treated in 1925—Reported in 1930

General Hospital	*Surgeon*
1. Breast	Prince
2. Cervix	Winslow
3. Ileum	Phillips
4. Cecum	Wright
5. Lip	Slater
Highland Hospital	
1. Breast	Dean
2. Breast	Fowler
3. Cervix	T. Jameson
4. Stomach	T. Jameson
5. Ovary	T. Jameson
6. Testicle	T. Jameson
7. Lip	T. Jameson
8. Lip	T. Jameson
9. Fundus	T. Jameson

Genesee Hospital	*Surgeon*
1. Ileum	Chapman
2. Cervical Lymphnodes	Sumner
Park Avenue Hospital	
1. Breast	Huber
2. Ileum	Bowen
3. Ovary	Hennington
St. Mary's Hospital	
1. Breast	Simpson
2. Kidney	Simpson
3. Intestine	Costello
4. Testicle	Costello

Summary

Breast	5	Lip	3
Cecum	1	Ovary	2
Cervical Lymphnodes	1	Stomach	1
Ileum	3	Testicle	2
Intestine	1	Uterus:	
Kidney	1	Cervix	2
		Body	1

Total 23

Table III

CASES OF CANCER LIVING WITHOUT RECURRENCE TEN YEARS AFTER TREATMENT

Treated in 1926—Reported in 1931

	Cases to be accounted for	Living	DEAD Of Cancer	DEAD Of Other Diseases	Lost
Carcinoma of the Breast ...	12	6	2	3	1
Carcinoma of the Cervix ...	7	3	0	1	3
Carcinoma of the Gastro-intestinal Tract	5	5	0	0	0
Carcinoma of the Male Geni-to-urinary Organs	4	2	0	0	2
Carcinoma of the Body of the Uterus	2	1	0	0	1
Miscellaneous Malignancies .	5	4	0	0	1
	35	21	2	4	8

Table IV

CASES OF CANCER LIVING WITHOUT RECURRENCE TEN YEARS AFTER TREATMENT

Treated in 1926—Reported in 1931

General Hospital	*Surgeon*	*Park Avenue Hospital*	*Surgeon*
1. Breast	Wooden	1. Cervix	Hennington
		2. Stomach	Sutter and Ward
Genesee Hospital		*St. Mary's Hospital*	
1. Cervix	A. E. Davis	1. Breast	Simpson
2. Cervix	A. E. Davis	2. Breast	Simpson
3. Sigmoid	Dickinson	3. Breast	Simpson
4. Testicle	Paine	4. Breast	Simpson
5. Urethra	Paine	5. Sigmoid	Simpson
6. Cervical Lymphnodes	A. E. Davis	6. Lip	Simpson
7. Fibrosarcoma	A. E. Davis	7. Fundus	
8. Choroid	Barber	*Strong Memorial Hospital*	
		1. Breast	W. J. M. Scott
		2. Stomach	W. J. M. Scott
		3. Stomach	W. J. M. Scott

Summary

Breast	6	Lip	1
Cervix	3	Sigmoid	2
Cervical Lymphnodes	1	Stomach	3
Choroid	1	Testicle	1
Fibrosarcoma	1	Urethra	1
		Uterus	1

Total 21

ONE of the patients who was reported to have died of diseases other than cancer during the preceding five years, died of pneumonia; one of cholecystitis; and one of heart disease.

In a paper by Victor Bonney (*Amer. Jour. Obstet. Gyn.*, December, 1935, 30:815), the author says: "Ten per cent of all recurrences appear between the fifth and the tenth years. Five year freedom is a 90 per cent cure. Ten year freedom, on the other hand, is 100 per cent cure."

One patient, reported to be living without recurrence ten years after a radical mastectomy for carcinoma last year, has since died. She was a patient of Dr. Huber. At the time of her operation in 1925, she was sixty-four years old. According to the life expectation tables of the Insurance Companies, she had an expectancy of 11.67 years. She lived 10.33 years and was seventy-four years old when she died of pneumonia. The suspicion that the pneumonia was in fact a late metastatic carcinoma is justified, but the attending physician reported that there was no doubt in his mind but that acute lobar pneumonia was the cause of death. The other patients are living and well this year (1936).

In 1931, at the Genesee Hospital, we

—Continued on page 218

Contemporary Progress

Medicine

Intestinal Absorption in its Relation to Allergy

R. L. BENSON (*Canadian Medical Association Journal, 36:129-134, February, 1937*) states that in cases of allergy, cutaneous tests with food and dust antigens should be a routine procedure. He has found it necessary to use concentrated extracts, and to supplement the scratch tests with intracutaneous tests. With these precautions, he has found that positive reactions can be obtained in cases of food allergy, and that it is rarely necessary to resort to trial diets to determine foods to which the patient may be sensitive. His own experiments, and those of others, using passive transfer tests, have shown that food antigens may pass unchanged through "any part of the alimentary tract, from the mouth to the rectum." It is probable that pathological conditions in the intestines increase such absorption. But the possibility that the cause of the allergic symptoms may be a bacterial allergy, or that there may be various factors responsible (mixed types), should always be kept in mind. The sinuses, sputum and various foci should be cultured and vaccines prepared for cutaneous testing. Most important of all, in the author's opinion, is a bacterial study of the stools; not only the pathogenic bacteria of the intestines, but also the normal bacteria may be responsible for allergic reactions as they also produce toxins which may be absorbed. In such bacterial studies, a most exacting technique must be used; this involves blood-enriched culture media, plating on a decimal scale, and identification and counting of the bacteria. Specific vaccines made with care from each strain should be used for intracutaneous tests; the strain to which the patient is sensitive may be indicated not only by positive local reactions, but also by systemic reactions. The author has found that treatment with vaccines gives results in accordance with the reactions. Some patients found to be sensitive to specific strains of intestinal bacteria have been relieved of symptoms by specific vaccine treatment when all other methods failed.

COMMENT

Since using delayed skin reactions, our own results have been much better. Very often a skin reaction appears six, twenty-four or even forty-eight hours after the scratch test. The patient returns at these intervals following the test—as a routine. Then a simplified trial diet can be used as a double check. The positive foods are given and if no reaction follows in twenty-four hours it may be assumed that the positive skin test can be disregarded. Some foods give a positive skin test when they actually cause no trouble. Many allergic conditions improve as soon as a focus of infection is removed. Bacterial examination of the stools is a complicated procedure and thus far vaccines, in my experience, made from these cultures, are of little value. An improved technic, such as the author suggests, may make quite a difference.

M.W.T.

Essential Thrombophilia

K. K. NYGAARD and G. E. BROWN (*Archives of Internal Medicine, 59:82-*

106, January, 1937) note that there are three well-defined occlusive diseases of the arteries—thrombo-angiitis obliterans, thrombo-arteriosclerosis obliterans and occlusion due to embolism. But occasionally a case is observed that does not conform to any of these three types. They report 5 such cases from the Mayo Clinic, in which the arterial occlusion resulted in gangrene. Four of the 5 patients were men; all were gentiles; the ages ranged from twenty-six to fifty-three years. In only one of these cases could the pathological changes be considered as secondary to operation; one patient had had a chronic infectious arthritis, but this had not been active for seven or eight years preceding the onset of the vascular symptoms. In no case could an underlying primary disease be found. The clinical picture was characterized by recurrent "episodes" of arterial occlusion in the large and small arteries of the extremities, as well as in the brain. Recovery may be complete after an attack; or the occlusion in an extremity may lead to gangrene. The pathological changes in the vessels of the gangrenous extremity were those of a nonreacting type of thrombosis without evidence of disease in the intima or other coats of the vessel walls. A study of the coagulability of the plasma in these cases showed this to be definitely increased at the time of the thrombotic episodes. These changes in coagulability were not found to be associated with any physiochemical changes in the plasma demonstrable by any laboratory methods yet employed. The authors are of the opinion that the rare cases of occlusive diseases of the arteries, as described, represent a separate disease entity, for which they suggest the name of "essential thrombophilia."

COMMENT

Extremely interesting. Tissue extract seems to work very well in many cases of peripheral vascular disease, acting as a vasodilator. Clinically it is worth the trial in all disturbances of circulation in the extremities.

M.W.T.

The Bone Marrow in Anemia

RAPHAEL ISAACS (*American Journal of Medical Sciences, 193:181-191, February, 1937*) notes that with the use of liver and stomach therapy in pernicious anemia and the "revival" of the method of using massive doses of iron in secondary anemias, "the necessity for a critical analysis of the indication of these types of treatment has become more evident." It is in reality the state of the cells in the bone morrow that determines the capacity of the patient to react to a given type of treatment. A number of studies of the sternal bone marrow have been made in anemia; the bone marrow of the sternum is easily accessible and is "a relatively stable source of both red and white blood cell forming tissue." The author describes a new method of counting the number of cells per cubic millimeter of a specimen of bone marrow; and also of making differential counts of the various types of red cells. He finds that the average normal sternal bone marrow shows from 900,000 to 1,000,000 nucleated red cells of all types per cubic millimeter. His study of the bone marrow in various types of anemia by this method leads him to conclude that: In aplastic and hypoplastic anemia (the latter type occurring in chronic nephritis), the development of the red cells is inhibited in the primitive blast stage. In this type of anemia, no known specific therapy is effective. In pernicious anemia and most other macrocytic anemias, the development of the red cells is inhibited at the megaloblast stage; this type of anemia responds to liver and stomach extract. In anemia associated with leukemia and infection, the inhibition occurs at the normoblast stage. Such types of anemia appear to be the result of "factors other than deficiency" and are best treated by correction of the primary cause.

COMMENT

Unfortunately bone marrow studies are not practical in general practice. We must be content with other methods. But such studies are very valuable from the research standpoint.

M.W.T.

Clinical Studies on Verodigen

J. P. BAKER, Jr. and NATHAN BLOOM (*Annals of Internal Medicine, 10:605-621, November, 1936*) report a study of the therapeutic effect of verodigen, a gelatin-like fraction of digitalis, which has been used for a number of

years in several European countries, and more recently in this country. In the authors' series of cases verodigen was used in unselected cases of organic disease with congestive failure and rapid heart rate; some of the patients were kept in bed in the hospital; others were ambulatory. None had received digitalis preparations for one month previously. The therapeutic effects obtained with verodigen in these cases were "qualitatively similar" to those obtained with digitalis; subjectively, dyspnea, orthopnea and other distressing symptoms were relieved; objectively, there was a slowing of the heart rate, an increase in vital lung capacity; disappearance of râles, ascites, and edema; diminution in the size of the liver; and finally, an increased output of urine. The maximum therapeutic effect of verodigen was often obtained with a dosage "far less" than that calculated on a basis of the cat unit (1/80 gr.). The total amount necessary for complete digitalization varied from 6/80 to 10/80 gr. Some patients showed excellent therapeutic effects as early as the second or third day; others required a longer time for complete digitalization. In a number of patients followed up for several months, a daily dosage of 1/240 gr. was sufficient to prevent any recurrence of congestive failure; this dose also caused no toxic reactions. These findings indicate that verodigen is "rapidly and completely absorbed." Very few toxic symptoms were observed, on account of the small dosage employed. In a few cases in which the drug was given in over-dosages, there were no gastric symptoms, indicating that it is well tolerated by the gastro-intestinal tract.

COMMENT

The young practitioner begins his work faced with as many digitalis preparations as there are diseases. The public foots the bill for these various products — and the more complicated the formula, of course the more cost to the patient. My own impression is that a good tablet prepared from digitalis leaves is all that is needed and is much more economical. But there is such a difference in the price of digitalis leaves made by different manufacturers that one wonders where the discrepancy is. A good rule is to select a good product and stick to it. Perhaps it is just as well to have gastric symptoms as a guide to overdosage.

M.W.T.

The Saliva in Achylia Gastrica

G. FABIAN (*Zeitschrift für klinische Medizin, 131:403-422, Jan. 9, 1937*) reports a study of the saliva as obtained in the fasting state in various types of achylia gastrica. He found that the amount of the saliva was reduced in all types of achylia, but to the greatest degree in cases showing the greatest "anatomical" damage to the gastric mucosa —hence in pernicious anemia. The amylase content and the chloride content of the saliva show a marked reduction in the achylias associated with inflammatory and degenerative changes in the gastric mucosa (gastric carcinoma and pernicious anemia), but are normal or even somewhat above normal in purely functional achylia without lesions of the mucosa. A definite distinction can, therefore, be made between functional achylia gastrica and the achylia of gastric carcinoma or pernicious anemia.

COMMENT

This will be a useful test if it is dependable. Various tests have been used on the saliva in the past but are in little use today. This one should be investigated carefully since it would be of great help to the clinician.

M.W.T.

Vitamin B Complex in Chronic Arthritis

C. LEROY STEINBERG (*American Journal of Digestive Diseases and Nutrition, 3:765-766, December, 1936*) found that in 118 patients with chronic arthritis, chiefly of the atrophic type, gas, constipation and anorexia were almost invariably present. These symptoms were associated with weakness and apathy. In cases in which x-ray studies of the gastro-intestinal tract were made, spasticity of the colon was found. The gastro-intestinal symptoms, the spasticity of the colon, and the associated weakness noted in these cases are also symptoms of vitamin B deficiency. The administration of "Vitamin B Complex" or brewers' yeast in 108 cases of atrophic arthritis with associated gastro-intestinal symptoms alleviated the latter in over 95 per cent. of the cases and improved the general condition of the patient. No history of vita-

min B deficiency in the diet of these patients was obtained, so that it seems probable that there is an increased demand for vitamin B in chronic arthritis. The administration of a vitamin B supplement as an adjunct to treatment in this condition is, therefore, of definite value.

COMMENT

So many vitamin preparations. Pharmacies are loaded with them and the public is vitamin-minded. And in certain instances they may do harm. No doubt that vitamin B will help many conditions such as the author suggests. But it would be much better medicine if we tested bloods to see if a vitamin A, B, C, or D deficiency existed. In the New England Journal of Medicine, *215:1159, December 17, 1936, Kenneth D. Blackfan has discussed the various tests for detection of vitamin deficiencies. For vitamin A, the antimony trichloride test is used. For B, the pyruvic acid test has been employed but further work is necessary. Vitamin C is tested by titration with the dye indophenol blue, which forms a colorless compound with ascorbic acid in urine and tissue, but it is not yet perfected for blood tests. Vitamin D is tested by the phosphatose test, which is also used for calcium and phosphorus. Blackfan concludes that there is much to be done. However, it is a step in the right direction and will ultimately stop the indiscriminate use of vitamins.*

M.W.T.

Surgery

Use of Cyclopropane Anesthesia

U. H. EVERSOLE, L. F. SISE and P. D. WOODBRIDGE (*Surgery, Gynecology and Obstetrics, 64:156-164, Feb. 1, 1937*) report observations on the use of cyclopropane anesthesia at the Lahey Clinic, Boston, Mass. This form of anesthesia was first used at the Clinic in the fall of 1933; the number of cases in which it has been employed has increased from 553 in 1934 (13.3 per cent. of the total anesthesias) to 1437 in 1935, representing 34.1 per cent. of all anesthesias and 54.5 per cent. of inhalation anesthesias. The technique of cyclopropane anesthesia differs from that of other inhalation anesthesias; with cyclopropane a high percentage of oxygen is used, and only enough of the anesthetic agent is added to induce and maintain anesthesia. The signs of the depth of anesthesia are parallel to those with other inhalation anesthesia. As unconsciousness and even deep surgical anesthesia can be reached rapidly with cyclopropane, the lines of demarcation between the different stages may be indefinite, unless the patient is very carefully watched, and the induction of anesthesia is fairly slow. The toxicity of cyclopropane is low; its chief toxic effect is a temporary disturbance of the heart; and any marked change in the pulse rate, any irregularity not present before anesthesia was begun, any sudden drop in blood pressure, or "narrowing" of pulse pressure is an indication for lightening the anesthesia. With cyclopropane, however, it has been found that "the respiratory system always fails some time before the circulatory system," which places it in the group of safe anesthesias. The authors have found cyclopropane of particular value for obstetrical procedures, operation for which moderate relaxation is desired, for intratracheal anesthesia, for supplementing other anesthesia, and for those cases "in which an abundant supply of oxygen is desirable."

COMMENT

This excellent article, which is a clear presentation of considerable experience, offers broad information very practically classified. Its value as a clinical report cannot be questioned and we hope that all interested in anesthesia will read and absorb it. However, its supreme value is in demonstrating that anesthesia is rapidly growing into one of the broadest and most important of specialties. This rapid evolution of anesthesia should be very interesting to many of our well prepared young clinicians who desire to avoid the general practice of medicine.

C.H.G.

Postoperative Lung Abscess

J. V. BOHRER (*American Journal of Surgery, 35:64-75, January, 1937*) presents a discussion of the embolic and aspiration theories of lung abscess, and presents case histories showing that typical lung abscess frequently follows pulmonary embolism. Other points in favor of the embolic origin of lung abscess are noted. In a study of 100

diphtheria deaths at the Willard Parker Hospital, New York City, false membrane with its contaminating organisms was found in the aborizations of the bronchial tree, but no lung abscess was found. However, in 85 cases of diphtheria in which tracheotomy was done involving an incision with "its potentialities of thrombosis and embolous formation," lung abscess was found in 3.5 per cent. Many measures have been devised to prevent aspiration of any infective material after tonsillectomy, yet lung abscess is a more frequent complication of modern tonsillectomy with possibility of injury to the venous plexus, than the older operation of tonsillotomy. The prevention of postoperative lung abscess, therefore, depends upon the prevention of postoperative embolism and thrombosis and is but a part of this larger problem. If lung abscess develops postoperatively and is of the fulminating type, the author maintains that external drainage within a few weeks, as soon as this can safely be done, is the treatment of choice. With this method there is less destruction of pulmonary tissue, and less chance of metastasis to the opposite lung. Where such lung abscesses have been allowed to become chronic, more radical surgery, involving a higher mortality, is necessary.

COMMENT

This author discusses the aspiration and embolic theories of lung abscess and follows with some very interesting case histories and case reports. His review of recent literature has been thorough and well indexed.

C.H.G.

Splenic Extract in the Treatment of Fractures

T. WHEELDON (*Surgery, Gynecology and Obstetrics, 63:761-767, December, 1936*) has used splenic extract in the treatment of bone and joint tuberculosis and found that it resulted in definite improvement. He has since used splenic extract, given by mouth as an addition to the diet, in the treatment of fractures. It was first used as an adjuvant to operative measures in the treatment of ununited fractures; in these cases it was found to hasten union and establish a firm union. In another series of cases of ununited fracture in which the position of the fragments was good, but lack of union had persisted seven to twelve months, splenic extract was given, and no surgical treatment was attempted, the patients using crutches. In all these cases, union was obtained. In another series of fractures united in bad position, the fractures were properly reduced and splenic extract given; callus formation and satisfactory union were definitely hastened by the administration of the splenic extract. In one case of fragilitas ossium, union of fractures was obtained in good position, so that deformity was corrected; the condition of the bones as a whole also showed definite improvement roentgenologically. In 14 cases of new fractures, after proper reduction splenic extract was given, and in these cases union was definitely hastened. In cases in which calcium and phosphorus retention was determined, it was found to be much increased by the administration of splenic extract.

COMMENT

The experience of this author is very stimulating. Unless discounted by equally careful observations made by other surgeons in other clinics, we should expect this splenic feeding to become a regular procedure in cases of bone tuberculosis, ununited fractures and fragilitas ossium. It seems to be of tremendous value in a small but very important group of cases.

C.H.G.

Intra-Abdominal Adhesions

L. M. BOGART (*Archives of Surgery, 34:129-148, January, 1937*) reports an experimental and clinical study of intra-abdominal adhesions. In the experimental animals (rabbits), the best results in the prevention of adhesions after intra-abdominal operative procedures and in the reduction of mortality were obtained by introducing papain in sodium citrate solution into the abdomen. In 30 patients in which abdominal operations were done, there were 8 in which no or only one previous operation had been done; in the other cases two or more previous operations had been done. These patients showed definite symptoms of intra-abdominal adhesions. In these cases following operation, papain in sodium citrate solution was poured into the abdomen, 200 to 300 cc. every few minutes until 1,500 cc. had been used. The important point is to cover all the ab-

dominal organs with the fluid and to draw the omentum over the abdominal contents. The solution used is prepared by shaking one ampule of papain (0.25 mg.) in 500 cc. of 0.25 per cent. sodium citrate solution, then adding 1,000 cc. of the solution to make 1,500 cc., giving a 1:25,000 papain solution. Of the 30 cases reported 2 died, but death was in no way attributable to the papain. In 2 cases results were poor (one of these patients requiring re-operation); in 2 good clinical results were verified by operation for other conditions; in 22 cases good clinical results were obtained; in 2 late results were not determined.

COMMENT

Interesting report concerning the prevention of intra-abdominal adhesions.

C.H.G.

Blood Changes After Surgical Operations

W. W. WALTHER (*Lancet, 1:69, Jan. 2, 1937*) reports an estimation of the hemoglobin, relative cell and plasma volumes, plasma chloride, and plasma proteins after major abdominal operations in 50 cases. Most of these patients (27) were given rectal infusions or forced fluids by mouth; some received no special treatment; some (9 cases) were given intravenous saline. From the findings he concludes that after major operations there is a definite anhydremia. The degree and duration of this anhydremia depends upon the after treatment. If it is left untreated shock may result from the loss of plasma and concentration of red cells. If shock does not result, dehydration interferes with the patient's convalescence and prolongs recovery. This anhydremia, the author has found, is best overcome by the oral administration of fluid, or if this is not possible, by fluid per rectum. In the cases so treated dehydration was prevented, and the patient's condition improved rapidly. No marked chloride depletion was noted after operation; thus the administration of chloride "in excess" in the form of natural saline does not appear to be indicated; there is danger of hydremia from excessive administration of saline. After operation there was a tendency to loss of plasma protein; this loss was prevented to a large extent by fluid *per os* or *per rectum*, but intravenous saline tends to further increase this loss. Owing to the danger of protein loss, the author is of the opinion that postoperative shock and severe burns should be treated by intravenous infusion of plasma.

COMMENT

A valuable study of the blood following major operations with conclusions as to administration of fluids and the doubtful value of saline solution as one of these fluids. The value of intravenous infusions of plasma may be considerable in postoperative shock and severe burns.

C.H.G.

Postoperative Sedation

R. F. CARTER and G. G. BROAD (*New York State Journal of Medicine, 37:255-256, Feb. 1, 1937*) report the results of routine postoperative sedation with barbiturates. In 100 cases operated by one surgeon, mostly abdominal operations, 59 were given a barbiturate, usually phenobarbital, in addition to the routine morphine and codeine; 41 were given no barbiturates, but otherwise the postoperative routine was the same. Distention and gas pains, as indicated by cathartics and enemas given, were less in the group given the barbiturates, and the incidence of cough was markedly reduced in this group. The abdominal cases given the barbiturates were discharged from the hospital on an average four days earlier than those not given a sedative. The patients given barbiturates also appeared definitely more comfortable and less disturbed during convalescence than those without sedatives. The average total dose of phenobarbital in these cases was 2.4 grains, and the average number of days during which it was given was nine. None of the patients sought further sedation after the drug was stopped either in the hospital or after discharge.

COMMENT

Optimistic conclusions from experiences with cases in which phenobarbital is used as the chief sedative postoperatively. Some claim similar results from pre-operative use of barbiturates. Further studies will be comparatively safe and ultimate conclusions will probably make postoperative patients much more comfortable than is the case routinely and without as much morphine and codeine as is usual.

C.H.G.

Urology

Male Hormone in Prostatic Hypertrophy

S. ZUCKERMAN of Oxford University *(Lancet, 2:1259-1262, Nov. 28, 1936)* states that previous experiments have shown that the injection of the female hormone — estrone — into immature male monkeys causes general enlargement of the prostate with relative diminution of the number of prostatic glands and stratification of the epithelium of the *uterus masculinus*. Experiments have also shown that the injection of various preparations of male hormone inhibited these changes in the prostate, even though the administration of female hormone was continued. In the experiments reported in this article the author found that a new synthetic male hormone (testosterone propionate) was very effective in inhibiting the effects of daily injections of estrone on the prostate of the experimental animals; and that this effect was obtained if the total amount of the male hormone preparation divided into weekly doses was equivalent to seven or more times the amount of estrone administered; in this respect it proved much more potent than male hormones previously used. These experiments suggest the value of the administration of male hormone in cases of benign prostatic hypertrophy in men. As the action of testosterone propionate was "powerful" as long as two weeks after its injection in the experiments reported, this indicates, in the author's opinion, that in clinical work the hormone injections need not be given more frequently than at weekly or fortnightly intervals.

COMMENT

About twenty years ago at a meeting of the Alumni Association of the New York Hospital the late Lewis A. Stimson stated that general medicine was then on the threshold of discoveries and advancements which would exceed those of general surgery up to that time. As a matter of fact both medicine and surgery have not only discovered and advanced but also have rather increased their interdependence.

The science of endocrinology has risen to large influence. This work by Zuckerman is in point. The sex hormones are not only very potent but a few from one sex influence for ill the development of the immature organs of the opposite sex. Correction of this ill effect follows injection of the hormone from the given sex. Such studies and results foreshadow a means of checking if not retrograding prostatic hypertrophy in human beings. Very early diagnosis must be reached. Then the patient must accept these preventive measures before he is a sufferer. There's the rub: acceptance of prevention based on objective symptoms before subjective symptoms compel respect for the condition. That a reliable synthetic male hormone, testosterone propionate, has been discovered is one of the marvels of this field of medicine, if it stands the test of time.

V.C.P.

B. CUNÉO *(Bulletin de l'Académie de medécine, 100:434-446, Dec. 1, 1926)* maintains that benign hypertrophy or adenoma of the prostate arises from the glandular structure around the utricle, which represents the Müllerian duct in the male, and may therefore be considered the "female" portion of the prostate gland. This hypertrophy is due to the diminution of the activity of the male sex glands and the male hormone at the life period when prostatic hypertrophy develops. Cunéo has, therefore, used a testicular extract, which has been found to be efficient when given by mouth, in the treatment of several cases of prostatic hypertrophy. In 6 of these cases, the hypertrophy was in an early stage, causing only functional symptoms, dysuria and nocturnal pollakiuria. In 5 of these cases definite relief from these symptoms was obtained by the administration of the testicular extract by mouth; in 3 of these there was a diminution in the size of the prostate. In 6 other cases with residual urine, the amount of residual urine was markedly reduced in 4 cases (in 2 cases to zero); in 2 other cases treated for a shorter period of time, the residual urine showed no marked change, but there was definite improvement in dysuria and nocturnal pollakiuria. There were 6 other cases with more marked urinary obstruction, in which the author tried the treatment only on the insistence of the patients, as he considers it to be indicated in the earlier stages of prostatic hypertrophy. Yet definite improvement was obtained in all but one of these cases. Two patients who had been catheterizing themselves several times a day for chronic obstruction were able to pass urine normally and showed a "minimum" amount of residual urine. The administration of male hormone, the

author believes, is indicated chiefly as a prophylactic measure in elderly men who show functional urinary symptoms indicating beginning prostatic hypertrophy; it can be used with good effect also in the early stages of prostatic hypertrophy.

COMMENT

As the utricle is an embryonal vestige it is to be expected that certain cases of prostatic hypertrophy arise in it and to be wondered that most of those so arising are not per se malignant. In as much as none of Cuneo's cases seems to have come either to operation or to autopsy his theory as to the origin of hypertrophy in the utricle remains to be proved. Just as male hormones gone wrong may produce hypertrophy, according to the latest and growing opinion, so male hormones going right through proper selection and early administration may inhibit or reduce it. The one question not answered is: how much of the reduction was due to removal of mere congestion? These claims of Cuneo may duplicate those of the electrotherapeutists of years ago. They claimed every benefit of a prostate with symptoms to be a benefit of true hypertrophy, whereas in fact it was a benefit of congestion only. For one I believe that true hypertrophy when really established to the degree of causing subjective and objective symptoms does not recede, unless the case is exceptional and the degree slight.

V.C.P.

The Immune Response in Urogenital Infections

R. E. CUMMING and G. E. CHITTENDEN *(Journal of Urology, 37:226-238, January, 1937)* are convinced that in spite of the progress made in modern surgery and urology, "our knowledge of the defense reactions of the body and its immune mechanisms is still very limited." In their urological practice the authors have used a modified complement fixation test, in which the complement of the patient's own serum is used, and antigens are prepared from organisms isolated from tonsils, teeth, sputum, feces and other foci of infection. In their patients the type of complement fixation reading most frequently seen is "moderately hypersensitive with normal complement," especially in cases with chronic infection. In surgical patients the test shows marked lowering or complete absence of antibody production with normal complement, indicating "an extremely dangerous clinical situation" even though renal function tests are fairly normal. All such patients are given one or more transfusions of whole blood before or immediately after any surgical procedure "to provide fresh antibodies that are immediately available." By this means the authors have been able to prevent surgical accidents which previously were not anticipated. In medical cases with chronic infections, the bacterial flora from all possible foci of infection are cultured, and each individual strain so obtained is isolated and grown in pure culture; antigen-producing powers of these strains are studied; and the complement fixation test is done with the active antigens thus obtained. The results indicate the foci from which active absorption is taking place, and which require attention. For the treatment of patients showing hypersensitive complement fixation reactions, the authors use "desensitizing antigens"—a modified form of vaccine therapy. These antigens are prepared by combining the patient's own antigenic organisms with groups of the organisms of the test antigens as indicated by the complement fixation reactions. These vaccines are diluted until they contain only 5 to 10 organisms of each strain per cc. Such dilute vaccines or "desensitizing antigens" do not cause severe reactions, but have given satisfactory therapeutic results.

COMMENT

When one considers where artificial immunity against diphtheria was about 1900 and where it is today one realizes the very great progress in our defense against that one disease made in about 40 years. At that time we had little if any real measure of the defense reactions and immunity mechanisms of the body. Today we distinguish complement, antibodies and other phenomena. Cumming and Chittenden have gone another step in having evolved a measure of the resistance of the body to an infection as an element in the prognosis of operations. Even when the function tests of the kidney are high this resistance test may rate low because of the deficiency of antibodies. To supply these antibodies by blood transfusions seems direct, simple and scientific. Undoubtedly these two observers have blazed a new trail in the forests of safety for the patient.

V.C.P.

Alkaline Incrusted Cystitis

ALEXANDER RANDALL and E.

W. CAMPBELL (*Journal of Urology, 37:284-298, February, 1937*) note that it is generally recognized that the presence of a urea-splitting organism is necessary for the precipitation of alkaline salts in the bladder, but for deposition of the crystals on the bladder wall, some primary lesion also appears to be necessary. Alkaline incrusted cystitis may follow an acute cystitis, but this is not the rule; more frequently the primary lesion is a chronic cystitis, ulceration of the bladder wall, tumor, leukoplakia and malakoplakia, faulty drainage (as in the prostatic patient, or following operation or birth trauma in the female). Various organisms have been found to produce alkaline incrustation of the bladder; in the cases reported by the authors streptococci of both the hemolytic and the viridans type were isolated combined with colon bacilli; of the latter one strain was of the Morgan type No. 1, and "may have been a *Salmonella ammoniae.*" In their treatment of alkaline incrusted cystitis, the authors have found that it is not sufficient to acidify the urine by acid bladder and of the renal pelvis with acid-producing diets and drugs given by mouth; supplementary irrigations of the solutions are necessary. For the bladder, "tidal drainage" with a two-way catheter gives good results; the apparatus is regulated so that 1 to 2 ounces of the solution constantly "pools" in the bladder. The authors have found phosphoric acid in 1 to 2 per cent. solution to be the most satisfactory for irrigation of the bladder and renal pelvis, using a 1 per cent. solution for the bladder, and a 2 per cent. solution for the renal pelvis. They have found the kidney pelvis very tolerant to this solution, but in some cases the bladder does not tolerate the phosphoric acid solution at first, and weaker acids must be used for a time, gradually increasing the strength of such solutions until the phosphoric acid solution is tolerated.

COMMENT

The most marked case of incrusting cystitis I have ever seen or heard of was years ago in my clinic at the old House of Relief. The patient was a Chinaman addicted to opium eating. He was in a very low grade of health, badly constipated and the victim of a large stone filling the bladder and of encrusted cystitis. When the stone was removed the wall of the bladder was wiped as clean as possible but the crusts reformed in less than 24 hours. It has always seemed to me that these cases have not only a compound infection of several different organisms but also such a combination of organisms that the mucosa is attacked and denuded. Hence the precipitated salts adhere. Of course the profound changes in the mucosa of which Randall and Campbell speak are very potent in inducing the crusts.

To my mind one of the remarkable peculiarities of these cases is that the crusts do not form in the pelves of the kidneys and in both ureters. Possibly the squamous epithelium of the bladder permits them and the columnar cells elsewhere prevent them.

V.C.P.

Gum Acacia in the Treatment of Nephritic Edema

J. A. BOONE (*New England Journal of Medicine, 216:289292, Feb. 18, 1937*) discusses the use of gum acacia solution in the treatment of edema of the nephritic stage of subacute or chronic nephritis. This type of edema frequently responds to the usual diuretics or to nonspecific protein therapy; but in some cases a marked degree of edema, ascites and hydrothorax persists in spite of treatment by the usual methods. The cause of edema of the nephritic type is depletion of the proteins of the blood plasma resulting from the albuminuria. This leads to a fall in the osmotic pressure of the plasma with consequent passage of fluid into the tissue spaces. The ideal method of treatment would therefore appear to be the restoration of the blood plasma osmotic pressure. It is for this purpose that gum acacia has been employed. The author reports a case of nephritic edema in which the intravenous injection of gum acacia solution established diuresis and relieved the symptoms when other methods had failed. From his study of this case and a review of the literature, Boone concludes that gum acacia may "prove of definite value in the treatment of hypoproteinemic edema that fails to respond to the usual measures." It should not be tried until such measures have been given a fair trial and have failed. It would be contraindicated in cases with cardiovascular disease because of its effect in markedly increasing the blood volume. If there is any history of allergy, gum acacia should be given very cautiously, and whether the patient is allergic or not, skin tests should be made

before each injection. The solution to be used must be carefully prepared and freshly made-up unless sodium chloride is used in its preparation, and this is "a difficult and tedious procedure." Injections should be given slowly. Some observers have found evidence that the acacia has a curative effect on the renal lesion, but the author did not observe any beneficial effect other than the relief of the edema.

COMMENT

Surely great advances have been made when it is possible to put the finger on the cause of edema in nephritis as the loss of proteins of the blood plasma due to the loss of albumin in the urine. The indication is of course to restore osmotic function or pressure of the plasma. So simple a means as acacia is very inviting after the failure of other methods. Consideration of contra-indications, care in preparation, gentleness in application, and exclusion of allergy are all leading actors in this new therapeutic drama.
V.C.P.

Pediatrics

A Differential Diagnostic Test of Precordial Murmurs in Children

M. M. MALINER and I. OKIN (*Journal of Pediatrics, 10:77-89, January, 1937*) note that the significance of cardiac murmurs in children is difficult to determine correctly—whether such murmurs are purely functional, or whether they indicate a beginning organic lesion, probably rheumatic in origin. Five years ago, one of the authors (M.M.M.) devised a method of accentuating and localizing cardiac murmurs in children, which has been found to be of value in distinguishing between functional and organic murmurs. This consists in the subcutaneous injection of epinephrine in 1:1,000 solution; 6 minims are given children under eight years of age, 8 minims to older children. Immediately after the injection and every five minutes thereafter for thirty minutes, pulse, blood pressure and auscultatory findings are reported. If the epinephrine causes a faint or very soft murmur to appear, or if a louder murmur appears at the second left interspace, this is considered to be functional, but if a moderately loud or very loud murmur develops with maximum intensity at or near the apex and transmitted over the precordium or toward the axilla, this is considered to indicate an underlying organic valvular condition. Five years ago, 32 children considered to have functional murmurs were re-examined, using the epinephrine test, and on the basis of the type of murmur found with this test, 23, or 71.2 per cent., were considered to have an underlying organic cardiac condition. A recent follow-up (after five years) shows that of these 23 children, 11, or 47.8 per cent., have a definite valvular defect, 9 are still clinically free from cardiac symptoms, and 3 could not be traced. In the children over ten years of age the epinephrine test proved to be "100 per cent. correct." Recently 37 children with murmurs classed as functional by the New York Heart Association have been examined by the authors, using the epinephrine test. In 14 of the patients, the murmur remained soft, or disappeared, and was classed as functional. In 23 cases the murmur became definitely intensified and of the type considered to indicate an organic lesion. In 5 of these cases the murmur became very loud along the left sternal border at the third and fourth interspaces. This type of murmur, the authors consider, probably indicates a congenital heart defect, a small septal lesion. In the other 16 cases, a fairly loud systolic murmur developed with maximum intensity at the apex, transmitted to the axilla; these were considered cases of organic mitral insufficiency; in one case the apex murmur was systolic and diastolic, suggesting concomitant mitral stenosis; in another case a loud diastolic murmur developed at the second and third left interspaces; there was also a pistol-shot murmur in the groin; the systolic blood pressure increased and the diastolic decreased; these findings indicated "an organically competent aorta." On the basis of their findings, the authors recommend the epinephrine test as a simple procedure for intensifying cardiac murmurs, and urge physicians "to be cognizant of the threatening importance of the cardiac murmur, even without the expected concomitant signs and symptoms of organic valvular heart disease."

Changes in the Growing Skeleton After the Administration of Bismuth

JOHN CAFFEY (*American Journal*

of Disease of Children, 53:56-78, January, 1937) reports a roentgenographic study of the bone lesions observed in infants and children after treatment with bismuth for syphilis, and in new-born infants after treatment of the mothers during pregnancy with bismuth. After a single course of bismuth treatment, the roentgenograms taken within a month after the last injection showed bilaterally symmetrical bands of increased density across the extreme ends of the shafts of the long bones contiguous to the epiphysial cartilages. When the roentgenograms were taken several months after the completion of a single course of bismuth treatment, these bands were narrower and less dense, and were not situated at the extreme ends of the shafts, but "buried" at variable levels in the shafts; this difference depends on the growth in the length of the bones in the interval after the course of bismuth treatment. After several courses of treatment, multiple bismuth lines were observed in the shafts of the long bones, and "the direct relationship of the length of the interval between the courses of bismuth and the distances between the transverse lines were striking." In newly born infants whose mothers had been treated with bismuth during pregnancy, the roentgenogram showed similar transverse bands or lines, and the distance of the bands from the end of the shafts depends upon the interval between the bismuth treatment and the birth of the child. Experimentally bismuth was administered to growing dogs, and resulted in the appearance of similar transverse bands in the long bones; after prolonged treatment similar bands appeared in the flat bones. Histological examination of the bones in the experimental animals showed that the increased density of these bands was due to an excessive amount of calcified cartilaginous matrix with a corresponding decrease in the marrow spaces. Chemical analysis indicated that the actual bismuth content of the ends of the bones "played a relatively minor rôle in the production of the roentgen shadow." Other features of the bismuth lesion were the presence of "basophilic fringes" at the borders of the trabeculae, and reduction in the number of osteoblasts. While roentgenologically the skeletal lesions due to bismuth resemble those due to lead, yet histologically there is a difference, as the amount of lead deposited is relatively greater and the "peritrabecular fringes" are not present in bones affected by lead, while the giant cells found in lead poisoning were not present in the bismuth lesions. In syphilitic children treated with arsenic, no similar changes were found in the bones.

Whole Milk, Gelatinized Milk and Acidified Milk in Infant Feeding

C. L. JOSLIN (*Archives of Pediatrics, 54:20-25, January, 1937*) reports a comparative study of three groups of 50 infants each, fed on formulas that were the same in each group, except that in one group while cow's milk (pasteurized) was used, in the second, milk acidified with lactic acid, and in the third milk with 1 to 2 per cent. gelatine added. It is noted that both the addition of lactic acid and of gelatine reduces the curd tension of cow's milk. It was found that the infants fed on gelatinized milk and on acidified milk showed a better average rate of gain in weight than those fed on whole milk, which was especially marked in the first two weeks of treatment. Vomiting, poor appetite and constipation showed a reduced incidence in the gelatinized and acidified milk fed groups; the gelatinized milk was most effective in correcting constipation, especially when 2 per cent. gelatine was added. On the other hand, diarrhea developed more frequently in the whole milk group. A lower incidence of respiratory infections was noted in the gelatinized milk group, and 2 infants with eczema who happened to be in this group showed improvement in the rash.

Typhoid Fever in Children

W. F. BOPP (*Archives of Pediatrics, 53:777-783, December, 1936*) reports 3 cases of typhoid fever in children illustrating the difficulty of diagnosis, owing to the absence of typical symptoms. All of the patients had abdominal pain, intermittent and rather indefinite in location, but tending to localize in the lower right quadrant. In 2 cases a diagnosis of appendicitis was made, and one patient was operated with negative findings; the other patient was not operated "due to the conservative attitude of the surgeon."

In the third case, the symptoms suggested a lobar pneumonia, but x-ray examination showed this to be incorrect. In all 3 cases the diagnosis was finally established by laboratory methods—positive Widal tests and the finding of the typhoid bacilli in the feces. In all these cases, the author notes, "the classical symptoms of typhoid were conspicuous by their absence."

Vaccine Treatment of Pertussis

T. S. BUMBALO (*American Journal of Diseases of Children, 52:1390-1396, December, 1936*) reports the treatment of 152 cases of pertussis with the New York State pertussis vaccine, with a control series of 152 cases in the same families not treated with vaccine. Five injections of the vaccine were given over a period of ten days in doses increasing from 0.5 to 4 cc.—a total dosage of 10.5 cc. The author finds no evidence of "great therapeutic value" of the vaccine; it did not definitely shorten the course of the disease nor reduce the incidence of complications. On the other hand it had no ill effect.

E. J. BERMAN and E. V. PODWALNY (*Acta paediatrica, 19:232-244, Dec. 31, 1936*) report that in Russia a combination of Bordet-Gengou bacillus vaccine and scarlatinal vaccine (mixed strains) has been employed in the treatment of whooping cough; the scarlatinal (streptococcus) vaccine is employed because of the importance of secondary infections in whooping cough in intensifying the disease and causing complications. In 53 cases in which the authors used the combined vaccines, the disease was rapidly aborted in 6 cases only (in 4 of which the treatment was begun in the second week of the disease), but in 25 cases, a very definite improvement was obtained as shown by diminution in the frequency and severity of the attacks, cessation of vomiting, and improvement in the general condition; 10 of these cases were of a severe type. In 14 cases there was definite, but less marked improvement, and in 8 cases no definite effect of the vaccine therapy.

Clinical Notes

—Continued from page 184

to 200/80. The patient left the hospital on November 5th, 1936. Bed rest, high caloric nutrition, and sedatives were advised.

Follow-up in this case, up to date, shows that the patient's general condition has improved; that is, she has gained 6 pounds in weight, she is much calmer, and doesn't complain of precordial discomfort. The auricles, however, are still fibrillating. The blood pressure ranges from 180 to 200, and her last basal metabolism estimation was approximately normal.

Discussion

In the first case quinidine therapy was effectual and the result is apparently permanent. In the second case, although quinidine is said to be of more value in fibrillation than in flutter, the disordered auricular mechanism soon re-appeared in spite of the use of a maintenance dose of the drug.

This discrepancy may be explained as follows: In the first case the flutter was of recent origin; there was no circulatory failure and no cardiac stress; blood pressure was normal. Furthermore, the etiologic agent which presumably favored the onset of the disorder, namely, the upper respiratory infection, was completely out of the picture. In the second case, on the contrary, although the disordered mechanism was also of short duration, there was present a moderate degree of circulatory embarrassment, namely, a definite arterial hypertension. But of prime importance is seemingly the fact that the etiologic agent, that is, the hyperthyroidism which presumably favored the abnormal mechanism, contined to exist during the period of quinidine therapy.

From the study of these two cases, it would seem that while quinidine is a valuable drug and serves an important rôle in the treatment of auricular disorders such as fibrillation and flutter, it should be used only in cases that have been properly selected. The etiological factor which presumably induced the disorder must be controlled before quinidine therapy is attempted. For reasons stated in the discussion, the first case was suitable, while the second case was clearly unsuitable for quinidine therapy.

The writer wishes to acknowledge the kind collaboration of Doctor Irving R. Roth in the preparation of this report.

341 WEST 50TH STREET.

Editorials

—Concluded from page 166

mixture [somewhat similarly named] of acetylsalicylic acid and an alkali which is sweeping the country as not only a headache and hangover palliative but as a kind of cure-all—which dangerous competition may bear upon the frenzied acetanilid advertising campaign.

"The popular idea that its fairly frequent use is deleterious is in the great majority of cases false." Obviously, we have been woefully wrong in our convictions regarding acetanilid.

"Acetanilid may be injected in solution intravenously in considerable amounts, without depressing the heart [of animals]."

We are somewhat surprised that the possibility of any dose being lethal is admitted; for one would think that a drug was almost inert of which it could be declared that twelve grains administered to humans daily over a period of sixteen weeks did not result in any physical change, did not affect the nervous system or mental status, did not affect the blood pressure, did not affect the heart muscle or conducting mechanism, did not affect metabolism, did not affect the kidneys, and did not affect the blood in any noteworthy way. Here the medical investigators quoted would seem to have over-reached themselves. One would think they were reporting on the pharmacological effects of something like mineral oil.

Three of the medical investigators quoted in the advertisements found that they could feed mice, without harm, up to a daily amount equivalent to 1840 grains per day (3.83 ounces) for an adult human. These feedings were without ill effect.

One can readily see from all this how difficult it would be to cause signs of toxicity by administering acetanilid.

There has been a remarkable activity of late in pharmacologic circles looking to the rehabilitation of acetanilid as a safe drug, which spontaneous activity has naturally aroused great interest in Baltimore. Perhaps a certain large family fortune there also needs rehabilitation. So Baltimore is broadcasting the good news. Listen to this:

"The wide-spread possibilities of acetanilid medication must not be construed as an attempt to minimize the importance of medical attention; nor the value of periodical medical examinations, in the detection of underlying organic causes of ill health—all of which is unhesitatingly admitted and fully appreciated. But, when it is realized that organic disease is responsible for less than one per cent only of the chronic forms of headache—the necessity of a reliable headache remedy for the multitude of functional sufferers is apparent, especially if medical attention is not available, as so frequently happens. Medical practitioners appreciate this situation, realizing the impossibility of treating all the headache sufferers, and knowing that occasional relief afforded is not incompatible with their, or their patients' best interests. Therefore, from a practical standpoint, the physician is vitally interested in acetanilid, and even more so in a dependable headache remedy."

We doubt if a more touching appeal to the public and profession alike has ever been written. We unhesitatingly award the palm to the foregoing paragraph.

> Till over by Dalhem a dome-spire spring white,
> And "Gallup," gasped Joris, "for Aix is in sight!"

Restrooms for Dogs

THE setting out of trees in connection with the landscaping of whole neighborhoods bordering upon public building sites in certain parts of New York City has incidentally been of some service to our 300,000 city-immured canine friends while also serving the cause of civic beauty (and of sidewalk sanitation). The dogs may not have been in the minds of the planning architects, but the designs are serving, to an extent, a double purpose. Since each tree requires a goodly ground space around it, Towser finds a swanky restroom, or shall we say a shrine, whereat to institute the frequent eliminative ritual which distinguishes the canine cult.

Let these restrooms be multiplied throughout our cities. Let Towser and Hygeia be served at one and the same time. And let the instigator of the canine restroom be venerated, whether or not he schemed for Towser and all his blessed kind.

Medical Book News

• All books for review and communications concerning Book News should be addressed to the Editor of this department, 1313 Bedford Avenue, Brooklyn, New York.

Edited by TASKER HOWARD, M.D.

WILLIAM WITHERING
1741-1799

CLASSICAL QUOTATIONS
"Your patient is ready, Sir".

● "In the year 1775, my opinion was asked concerning a family receipt for the cure of the dropsy. I was told that it had long been kept a secret by an old woman in Shropshire, who had sometimes made cures after the more regular practitioners had failed. I was informed also that the effects produced were violent vomiting and purging: for the diuretic effects seemed to have been overlooked. This medicine was composed of twenty or more different herbs; but it was not very difficult for one conversant in these subjects to perceive that the active herb could be no other than the Foxglove."

William Withering (1741-1799). An account of the Foxglove and Some of its Medical Uses: with Practical Remarks on Dropsy and other Diseases. M. Swinney, Birmingham, 1785.

An Important Monograph on Digitalis

THE CLINICAL USE OF DIGITALIS. By Drew Luten, M.D. Springfield, Charles C. Thomas, [c. 1936]. 226 pages. 8vo. Cloth, $3.50.

The author has given an excellent review of the present status of digitalis therapy. The book is clearly written and well merits study by those interested in cardiovascular diseases. He has stressed many points of great practical importance and draws attention forcibly to the fact that it is not always necessary to completely digitalize the patient in order to obtain satisfactory results from digitalis. A great part of the book is devoted to developing the author's point of view that the important action of digitalis is on the heart muscle, and that its action on the conduction system is unimportant. Few people at present deny that digitalis has an important effect on heart muscle, but even after reading the author's argument, one remains unconvinced that the effect on the conduction system does not play an important part in the beneficial effects obtained in auricular fibrillation. It does not seem necessary to deny the well recognized effect on the conduction system in order to establish the importance of the muscular action. Perhaps, it might have been better had the author given more space in this section to the opposite point of view. The book is beautifully produced and original quotations have been freely used.

J. HAMILTON CRAWFORD.

A New Edition of Sheehan

PLASTIC SURGERY OF THE NOSE. By J. Eastman Sheehan. Second edition, entirely rewritten. New York, Paul B. Hoeber, Inc., [c. 1936]. 186 pages, illustrated. 4to. Cloth, $9.00.

The revival of interest in reconstructive surgery since its renaissance during the World War has been rather remarkable. This probably accounts for the second rewritten edition of Plastic Surgery of the Nose.

The first chapter on the Anatomy and Function of the Nose is well written and contains many superior diagrams.

The chapter on Operative Procedures describes the operations commonly performed in reconstructive surgery of the nose. It is very readable and not boresome or tiresome.

A sidestep into the realm of skin grafting is a welcome addition to the volume. In this chapter, the author mentions a test for skin viability prior to grafting.

He has found it practicable to fix a mean oxygen content and to test out a morsel of the skin for this content by means of "An ingenious invention." Unfortunately he describes neither the test nor the invention. The book on the whole is valuable particularly to one who is a novice in plastic surgery of the nose. It has been done by a man who has had

wide experience in this particular field of surgery.

WALTER A. COAKLEY.

A New Textbook of Surgery

TEXTBOOK OF GENERAL SURGERY. By Warren H. Cole, M.D. and Robert Elman, M.D. New York, D. Appleton-Century Company, [c. 1936]. 1031 pages, illustrated. 8vo. Cloth, $10.00.

This present volume of 1031 pages is the direct outgrowth of a formal recitation and lecture course in surgery given by the authors to third year classes at Washington University School of Medicine during the past eight years. It includes also the subject matter used to teach the students in the outpatient surgical clinic and contains much of the material given in the course on surgical pathology.

An attempt has been made to shorten the text by excluding relatively unimportant details, consequently a system of surgery will be required in instances where more extensive reading is desired. The specialties have been omitted although genito-urinary surgery and gynecology have been dealt with at some length. Certain features of neurosurgery have been included and the physiological basis of many diseases and their pathogenesis have been emphasized. Operations are discussed in principles but rarely in detail. Many microphotographs of various diseases, together with illustrations of the gross lesions, have been included. A separate chapter is devoted to surgical therapy of the endocrine glands. The treatment of wounds is emphasized. A working bibliography has been appended to each chapter. The object of the book is to present to the student a systematic survey of the whole field of surgery. Much of the advances in surgical treatment in recent years is adequately treated. The volume has been intentionally restricted to conciseness in order to encompass the important aspects of the general field of surgery.

The book should be found helpful not only to undergraduate students but also to general practitioners who desire to acquaint themselves with many of the recent advances which have been made in surgery. Even the experienced surgeon will find matters of interest and help in his perusal of this volume.

EMIL GOETSCH.

The Development of the Child

HOW WE CAME BY OUR BODIES. By Charles B. Davenport. New York, Henry Holt and Company [c. 1936]. 401 pages, illustrated. 8vo. Cloth, $3.75.

This is a biological history of the development of the child, from the fecundation of the ovum to its birth, by a savant of international reputation, who has spent the better part of his busy life in an intensive study of genetics and eugenics. The author says that "the book has not, however, been written solely or primarily for the biologist. It is hoped that a careful reading of it will create a renewed popular interest in children as the most wonderful of natural creations." There are three major parts: I. The Course of Development; II. The Machinery of Development; III. The History of the Machinery of Development. Each part is replete with modern concepts of ultimate structure, many of which are generally accepted, some of which are "necessarily hypothetical, and some speculative." His treatment of the genes is most illuminating. His style is fluent. He writes on the level of the intelligent lay reader. This is a book which will find a wide circulation amongst scientists and people who are feeling the responsibility of child life.

J. M. VAN COTT.

Some Old Time Recipes

FAVOURITE PRESCRIPTIONS. Edited by Sir Humphry Rolleston, M.D. and Alan A. Moncrieff, M.D. London, Eyre & Spottiswoode, Ltd., [c. 1936]. 227 pages. 8vo. Cloth, 10/6.

This book consists of a series of eighteen articles on hospital pharmacopeias originally published in The Practitioner. The prescriptions given are those that have found favor in some of the greatest hospitals in the British Isles.

From a historic standpoint the book is interesting, but unfortunately it fosters the use of many obsolete and unscientific combinations of drugs. The prescriptions do not have that simplicity of construction that is being taught to undergraduate medical students in our American medical schools. If we adhere to the rule that there must be a definite indication for the use of every ingredient in a prescription, then these prescriptions border on the "shot-gun" variety.

In spite of the recommendation of all

leading authorities that the Metric System be employed, only Imperial units (corresponding to our Apothecaries) are given. The symbols ℥ and ℈ are not used, the reason being that they were abandoned by the St. Bartholomew's Hospital Pharmacopeia in 1877. One therefore reads of awkward quantities such as 240 minims.

The use of preparations, which in many cases go back to antiquity, has led to much chaos and confusion in prescribing. They bear the effects of what Osler referred to as "The heavy hand of the Arabian." Polypharmacy should be discouraged, otherwise the physician in desperation will incline more and more to the use of proprietary remedies.

CHARLES SOLOMON.

On the Ramifications of Crime

HERE'S TO CRIME. By Courtney Ryley Cooper. Boston, Little, Brown & Company, [c. 1937]. 454 pages, 8vo. Cloth, $2.75.

This is a fascinating expose of crime by one who knows the underworld. Crime and division of the loot penetrate into almost every county and town and into the very life of our government, aided by dishonest office holders, police and politics.

It is a story of all the number one public enemies, their apprehension or devastation, with the observation that even after the removal of these gangsters, crime goes on, because the roots of the evil cannot be eradicated.

Crime is "Big Business" with millions engaged in it. Mr. Cooper says that the gangster seldom profits for when his bullet riddled body is laid at rest, his family is usually left destitute.

The profits are for dishonest lawyers, police and local politicians who control and are a part of gangdom. The facts show that these hamper the honest efforts of Attorney General Homer Cummings and J. Edgar Hoover in their untiring efforts to stamp out crime. The author tells of the prevalence of venereal diseases that cannot be controlled, wretched jail conditions, hostess rackets, white slave syndicates, narcotic addicts, shyster lawyers, quack doctors and rotten politics and police systems. To protect the general public, Mr. Cooper offers many suggestions but these require changes in our social, economic and political life. The task seems almost impossible. Federal agents are doing a splendid job but it will take years, money, and an intensive educational system before much can be accomplished.

MAURICE J. DATTELBAUM.

Some Medical Biographies

BRITISH MASTERS OF MEDICINE. Edited by Sir D'Arcy Power, F.R.C.S. Baltimore, William Wood and Company, [c. 1936]. 242 pages, illustrated. 8vo. Cloth, $3.00.

This delightful volume contains twenty-four short biographies of famous British physicians of the 17th, 18th & 19th centuries, together with their portraits and other interesting illustrations. These biographies are written by prominent members of the medical profession of today.

To anyone interested in the history of English medicine and its bearing on the general progress of the healing art during a remarkable period, this book should be appealing. As a delineation of strong, noble character, it is refreshing and stimulating. It is the type of book to be picked up, from time to time, by the busy practitioner who feels the need of mental relaxation.

J. M. VAN COTT.

The X-Ray in Urology

UROLOGICAL ROENTGENOLOGY. A Manual for Students and Practitioners. By Miley B. Wesson, M.D. and Howard E. Ruggles, M.D. Philadelphia, Lea & Febiger, [c. 1936]. 269 pages, illustrated. 8vo. Cloth, $5.00.

This is a distinctive contribution to the literature on roentgen diagnosis in urology. Its main feature is 227 well chosen and well printed illustrations which cover about every conundrum encountered in urological practice. The value of the illustrations is enhanced by concise but adequate case histories whenever possible.

It is this clinical attitude which should make the book particularly valuable to its readers. Wesson, who is probably responsible for most of the text, has gone beyond the scope of a diagnostic treatise and has added numerous paragraphs on the pathology and clinical management of urological diseases. We have here a miniature textbook on urology limited of course to conditions in which roentgenology plays a role.

The general practitioner will find this

to be a readable book; it is concise, clear, and brimful of information.

H. L. WEHRBEIN.

New Work on Therapeutics

THE ART OF TREATMENT. By William R. Houston, M.D. New York, The Macmillan Company, [c. 1936]. 744 pages. 8vo. Cloth, $5.00.

This book is a collection of material from a series of conferences held by the author with senior students and young physicians. Some of the sections are on "The Art of Treatment", "Specifics", "Psychotherapy", and "Disorders in which Physiological Considerations Guide Treatment."

The subjects are discussed in a leisurely manner, treatment being considered from all angles. There are many references to classical authors of general literature as well as medical, which add considerable interest to the book. The author states in the preface that "the design of the book is to encourage therapeutic thinking and is not intended to furnish at a glance what is good for this or that." A great deal of sound information is presented.

W. E. MCCOLLOM.

Langdon-Brown Revised

PHYSIOLOGICAL PRINCIPLES IN TREATMENT. By Sir Walter Langdon-Brown, M.A. and Reginald Hilton, M.A. Seventh edition. Baltimore, William Wood and Company, [c. 1936]. 308 pages. 8vo. Cloth, $3.00.

The popularity of this book is shown by the fact that this is the seventh edition since 1908. The point of view implied in the title is one which has been deservedly emphasized during the last decade or two. While exception might well be taken to points here and there, this book is written with such authority and lucidity that one does not hesitate to recommend it. It cannot take the place of more detailed books on physiology or treatment, but will probably have its greatest usefulness as a handbook for students first taking up the subject of therapy, and as a guide to rational treatment for graduates who want a short, accurate and inexpensive reference work.

MILTON PLOTZ.

Study of the Individual

PERSONALITY, ITS STUDY AND HYGIENE. By Winifred V. Richmond, Ph.D. New York, Farrar & Rinehart, [c. 1937]. 279 pages. 8vo. Cloth, $2.50.

Here is presented an attempt at organizing data with respect to the study of the origin and development of personality.

Personality is man's "fundamental psychophysical makeup as motivated by his life experiences." Methods for studying personality are biogenetic, anthropometric, physiologic and bio-chemical. Psychology has developed special personality tests. Psychiatry has aided, especially through the development of genetic psychology. The Italian school of Di Giovanni has developed the morphological approach emphasizing body build and its relation to personality. Kretschmer has worked out the asthenic, athletic and pyknic types. Intelligence is inheritable. The level of intelligence, once reached, appears to be the same until about middle age. There is little relationship between physical illness and intelligence per se.

The personality of the individual is largely a manifestation of his emotional makeup. The control of emotion resides in the thalamus. The cortex appears to direct sensations entering the thalamus. There are chapters dealing with defects and minor maladjustments such as the effects of physical handicaps as exemplified in encephalitis on personality changes. The treatment of personality maladjustments involves first, correction of physical ailments, then use of psychological approach, such as, suggestion or reconditioning of the individual; also, sociological therapy which involves changing the environment. There is an index together with references for each chapter.

The book is simple and not especially technical, it is written for lay consumption and will provide interesting reading for any practitioner interested in the subject.

STANLEY S. LAMM.

Textbook for Nurses—Urology

UROLOGY FOR NURSES. By Oswald S. Lowsley, M.D., and Thomas J. Kirwin, M.D. Philadelphia, J. B. Lippincott Company [c. 1936]. 493 pages, illustrated. 8vo. Cloth, $3.00.

This book appears long and detailed for the average busy nurse whose program is full and whose time for work in specialties is limited. It is rather more ideally suited, we believe, to those in post-graduate study and to those devot-

ing their time largely or entirely to urological nursing and surgical routine. The extensive up-to-date data make it an excellent reference book for repeated use, as it covers a wide variety of subjects and phases of the specialty. There is much of value to commend it not only to nurses, but to physicians and hospital internes, and to residents who are devoting their training exclusively to urology. Chapter four is an important one, as it gives all essentials in the use of different types of instruments, as well as their proper care. The chapter on diet is valuable and useful. The reviewer is particularly impressed with the authors' wisdom in including a chapter devoted to definitions of all urological terms.

AUGUSTUS HARRIS.

For the Ophthalmologist

A HANDBOOK OF OCULAR THERAPEUTICS. By Sanford R. Gifford, M.D. Second edition thoroughly revised. Philadelphia, Lea & Febiger, [c. 1937]. 341 pages, illustrated. 8vo. Cloth, $3.75.

The second edition of this valuable work is most welcome. A book of this nature, not only has a great reference value, but also is applicable to everyday problems. One not only finds in this second edition the standard and usual medication procedure, but also the less frequently used measures and most modern adaptions of techniques. The use of pituitrin in pain of herpes, platinum tattooing of the cornea, medical diathermy and ultra-violet light therapy are suggestive headings supplying very usable information.

JOHN N. EVANS.

An Authoritative Report

EUGENICAL STERILIZATION. A Reorientation of the Problem. By the Committee of the American Neurological Association for the Investigation of Eugenical Sterilization. New York, The Macmillan Company, [c. 1936]. 211 pages, illustrated. 8vo. Cloth, $3.00.

The problem of the inheritance of nervous and mental diseases is an old one. In analyzing the various views on the subject, one is immediately impressed with the fact that they are based not on real scientific data but more often on prejudice and superstition. The subject is a vital one, especially in the light of the recent trend toward sterilizing the mentally ill and the socially maladapted. Physicians are frequently consulted by their patients in the matter of marriage or of raising children in families where mental disease may be present in some of its members. Many countries and many states in our own country have passed sterilization laws. It is remarkable how little real scientific data and knowledge are available on the subject.

The book is a most valuable one, in that it presents a critical survey of the entire subject, viewed in a scientific and dispassionate light. Are mental diseases, epilepsy, mental deficiency, and criminality inherited? What are the bases for the sterilization laws? What is the difference between genetics and eugenics? What is expected from sterilizing a mentally sick person? These and many other similar questions are answered in the book. The book is one which every educated person should read and study. No physician should be without it, and legislators would do well to own it. The book is a real contribution to an important and vital subject. It will tend to dislodge many a person perched on the roof of an edifice of self complacency built of superstition, ignorance and even vindictiveness.

IRVING J. SANDS.

St. Louis Clinics

THE MEDICAL CLINICS OF NORTH AMERICA. Volume 20, number 2. (St. Louis Number). September, 1936. Issued serially, one number every other month by the W. B. Saunders Company, [c. 1936]., Philadelphia, 685 pages. 8vo. Per clinic year (6 nos.) Paper, $12.00, Cloth, $16.00.

This issue is well up to the high standard usually attained by this popular series. These articles by St. Louis clinicians are authoritative, well written and highly practical. The one by Olmsted, Williams and Bauerlein on hemicellulose and lignin is of exceptional importance and probably describes a significant advance in the dietary management of constipation. The article by Alexander is another in the excellent series of papers on emphysema which have come out of St. Louis.

MILTON PLOTZ.

BOOKS RECEIVED

Books received for review are promptly acknowledged in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

THE PHYSIOLOGICAL BASIS OF MEDICAL PRACTICE. A University of Toronto Text in Applied Physiology. By Charles H. Best, M.D. & Norman B. Taylor, M.D., Baltimore, William Wood & Company [c. 1937]. 1684 pages, illustrated. 8vo. Cloth, $10.00.

STAMMERING. By Elsie Fogerty. New York, Greenberg, Publisher, Inc., [c. 1936]. 64 pages. 12mo. Cloth, $1.25.

THE SCIENCE OF HYPNOTISM. By Alexander Cannon, M.D. New York, E. P. Dutton & Co., Inc., [c. 1936]. 126 pages, illustrated. 12mo. Cloth, $1.50.

AUTOPSY DIAGNOSIS AND TECHNIQUE. A Manual for Medical Students, Practitioners, Pathologists and Coroners' Physicians. By Otto Saphir, M.D. New York, Paul B. Hoeber, Inc., [c. 1937]. 342 pages, illustrated. 12mo. Cloth, $5.00.

THE 1936 YEAR BOOK OF DERMATOLOGY AND SYPHILOLOGY. Edited by Fred Wise, M.D. & Marion B. Sulzberger, M.D. Chicago, The Year Book Publishers, [c. 1937]. 720 pages, illustrated. 12mo. Cloth, $3.00.

FEEDING OUR CHILDREN. A Simple and Understandable Exposition of the Principles of Nutrition, together with their Practical Application to the Task of Planning Meals for the Various Ages. By Frank Howard Richardson, M.D. New York, Thomas Y. Crowell Company, [c. 1937]. 159 pages. 12mo. Cloth, $1.00.

BONES. A Study of the Development and Structure of the Vertebrate Skeleton. By P. D. F. Murray, M.A. New York, The Macmillan Company, [c. 1936]. 203 pages, illustrated. 12mo. Cloth, $2.50.

CARDIOVASCULAR DISEASE. A New Aspect of Cause and Treatment. By Joseph H. Schrup, M.D. Dubuque, J. H. Schrup, M.D. [c. 1936]. 20 pages. 12mo. Paper, 12c.

A HANDBOOK OF AMBULANT PROCTOLOGY. Offering the Latest Developments of Methods and Technic for Doing Proctologic Work by Office Methods. By Charles E. Blanchard, M.D. Second edition. Youngstown, Medical Success Press, [c. 1937]. 304 pages, illustrated. 8vo. Cloth, $5.00.

AN INTRODUCTION TO MEDICAL SCIENCE. By William Boyd, M.D. Philadelphia, Lea & Febiger, [c. 1937]. 307 pages, illustrated. 8vo. Cloth, $3.50.

ENDOCRINOLOGY. Clinical Application and Treatment. By August A. Werner, M.D. Philadelphia, Lea & Febiger, [c. 1937]. 672 pages, illustrated. 8vo. Cloth, $8.50.

THE 1936 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY. Obstetrics edited by Joseph B. DeLee, M.D., Gynecology edited by J. P. Greenhill, M.D. Chicago, The Year Book Publishers, [c. 1937]. 704 pages, illustrated. 12mo. Cloth, $2.50.

PHYSIOLOGICAL CHEMISTRY. By J. F. McClendon, Ph.D. and the late C. J. V. Pettibone. Sixth edition, revised and enlarged. St. Louis, C. V. Mosby Co., [c. 1936]. 454 pages, illustrated. 8vo. Cloth, $3.50.

THE MANAGEMENT OF OBSTETRIC DIFFICULTIES. By Paul Titus, M.D. St. Louis, C. V. Mosby Co., [c. 1937]. 879 pages, illustrated. 8vo. Cloth, $8.50.

CAUSE OF JOINT PAIN OCCURRING DURING ACTIVE IMMUNIZATION WITH SCARLET FEVER STREPTOCOCCUS TOXIN

In an effort to determine whether the joint pains occur as a direct result of the action of streptococus toxin on the joint tissue or because the involved joint tissue has at some time become sensitized to the protein contained in the toxin solution and in the latter case whether the protein resulted from the growth of the streptococcus or is present in the broth used for production of the toxin, CLAIRE E. HEALY, Chicago (*Journal A. M. A.*, Feb. 20, 1937), carried out experiments on sixty-three young adults who complained of joint pains during the course of immunization against scarlet fever. Joint pain was caused in the sixty-three adults by the subcutaneous injection of sterile, filtered streptococcus toxin in broth solution, of which fifty-three gave a history of previous occurrence of joint pain or of symptoms suggestive of rheumatic infection or previous streptococcic infection. In forty-seven the joint pain produced by the injection was due to the toxin alone. In eleven toxin was the chief factor in the causation of joint pain. In five the pains were not caused by the toxin but were attributable to protein contained in the broth solution or to coincident active foci of infection in these patients. The fact that in most instances pain caused by sterile filtered streptococcus toxin in broth solution could not be reproduced when the toxin in the solution was destroyed by heating or when diluted broth was given indicates that the pain was most frequently due to toxic action and not to sensitization to protein resulting from the growth of the streptococcus or to protein present in the broth used in the production of the toxin.

News and Notes

THE NATIONAL HEALTH COUNCIL

THE re-election of Dr. Donald B. Armstrong as President of the National Health Council was recently made public. Other officers re-elected were: Timothy N. Pfeiffer, Vice-President; Dr. Maurice A. Bigelow, Secretary; and Frederick Osborn, Treasurer.

Dr. Armstrong is Third Vice-President of the Metropolitan Life Insurance Company; Mr. Pfeiffer is Treasurer of the American Social Hygiene Association; Dr. Bigelow is Professor of Biology at Teachers College, Columbia University; and Mr. Osborn is Secretary-Treasurer of the American Eugenics Society.

It was announced also that the American Red Cross and the Maternity Center Association have become Active Members of the National Health Council. The Red Cross has been an Advisory Member for a number of years.

The following directors have been re-elected for a period of three years: H. Edmund Bullis, Lewis H. Carris, S. J. Crumbine, Hugh S. Cumming, William DeKleine, Louis I. Dublin and Ray Lyman Wilbur.

INTERNATIONAL CONGRESS OF LARYNGOLOGISTS

THERE will be an International Congress of laryngologists on July 13, 1937 during the session of the International Congress of Singers, July 12-19, at the Paris International Exposition of 1937.

A cordial invitation is extended to all doctors and laryngologists. Addresses will be confined to the anatomy, physiology, pathology, hygiene and therapeutics of the singing and speaking voice.

Aside from reduced rates for tourists (see newspaper announcements) there will be special privileges for the doctors attending the Congress on payment of a subscription fee of fifty francs. These privileges include free admission to the exposition during the International Singing Congress (July 11-20) as well as free admission to all the artistic and musical representations given at the headquarters of the Congress.

Important reductions will be granted on the French railroads and on the French Line.

The titles of intended addresses and the subscription fee of fifty francs should be sent before June 15 to Dr. Labarraque, Rue Miromesnil, Paris, France.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY

Second Annual Postgraduate Institute

THE Second Annual Postgraduate Institute of the Philadelphia County Medical Society to be held in Philadelphia April 12-16 has a most imposing list of speakers.

At the dinner which will be held on Wednesday evening, April 14th, Dr. J. Shelton Horsley of Richmond, Virginia, will deliver the Dr. J. Chalmers DaCosta Oration on "Peritonitis."

The subject of this year's meeting, "Diseases of the Chest and Upper Respiratory Tract," is one of widespread interest and a large attendance of physicians from the entire east is expected.

INTERNATIONAL CONGRESS OF HEPATIC INSUFFICIENCY

WHILE the universal exhibition is being held in Paris, the International Congress on Hepatic Insufficiency will be in session at Vichy on the 16th, 17th and 18th of September, 1937, under the presidency of a member of the Academy of Medicine, Prof. Maurice Loeper, of Paris. It will be divided into two sections:

1) Medicine and Biology
2) Medical, Surgical and Hydrological Therapy

Papers will be submitted in the two sections by the following gentlemen of different countries:

Medicine and Biology:

K. Glaessner (Vienna): The Functional Diagnosis of Hepatic Insufficiency.

R. Debre, Gilbrin, Semelaigne (Paris): Enlarged Liver in Children.

Binet (Paris): The Sulphur Function of the Liver. The Edema Associated with Liver Dysfunction.

Lemaire and Varay (Paris): Pathogenic Study and J. Olmer (Marseilles):

Clinical Study; Urbach (Vienna): The Skin and the Liver; Parhon (Bucharest): The Liver and the Endocrine Glands; Hamilton Fairley (London): The Stages of Hepatic Insufficiency in the Course of Malaria.

Therapy:

Lathan A. Crandall (Chicago), A. C. Ivy (Chicago), Anthony Bassler (New York City), Norman Elton (Reading) and Hyman I. Goldstein (Camden): Hepatic Insufficiency in its Relations to General Nutrition and Especially to the Nervous System.

M. Brule (Paris): Hepatic Therapy in Cases of Intolerance.

M. Villaret, L. Justin-Besancon, R. Cachera, and R. Fauvert (Paris): Circulatory Insufficiencies and their Treatment.

Pięry and Milhaud (Lyons): The Hydro-Mineral Therapy of Hepatic Insufficiency.

DeGrailly (Bordeaux): Cellular Insufficiency and its Therapeutic Indications.

Gallart-Mones (Barcelona): Diet in the Restoration of an Impaired Liver.

Pribram (Berlin): Pre-operative and Post-operative Hepatic Insufficiency and its Preventive and Curative Treatment.

P. Duval, Gatelier, J. C. Roux, Goiffon (Paris): The Prognostic of the "Operative Crisis" by the Examination of the Hepatic Functions.

It may be recalled that this Congress will be preceded by the Second International Congress on Gastro-enterology, to take place in Paris on the 13th, 14th and 15th of September, 1937, under the presidency of Prof. Pierre Duval, at which two questions will be discussed:

1) The Early Diagnosis of Cancer of the Stomach, under the presidency of Profs. P. Duval and Gosset of Paris, and of Prof. Konjetzny of Berlin.

2) Acute and Chronic Occlusion of the Small Intestines: Authors have been selected in England, Belgium, Spain, the U. S. A., Italy and Poland for papers dealing with this latter question.

Those desiring to attend these Congresses may receive information by applying to Dr. Anthony Bassler, 121 East 71st St., New York City. A large contingent from this country is arranging to go.

THE COMMONWEALTH FUND

IN ITS Annual Report for 1936, the Commonwealth Fund records appropriations amounting to $1,967,153.26, intended, in the words of its founder, Mrs. Stephen H. Harkness, "to do something for the welfare of mankind." Both income and appropriations for 1936 were larger than those of recent years, the gifts being the largest since 1931.

More than two-thirds of the total was devoted to the betterment of health. Grants were made for public health service to rural communities, rural hospitals, medical education, and medical research. Postgraduate education in medicine was emphasized, the Fund believing that such work is of major importance in improving the quality of medical service.

At the close of the fiscal year, September 30, 1936, the invested assets of the Fund had a book value of $42,607,226.31 and a market value of $41,039,182.93.

The directors of the Fund are as follows: Edward S. Harkness, president; Malcolm P. Aldrich, Samuel H. Fisher, William M. Kingsley, Robert A. Lovett, George Welwood Murray, and Dean Sage.

HISTIDINE TREATMENT OF PEPTIC ULCER

The use of histidine in the treament of peptic ulcer is of much current interest. Recently Feldheim reported a comparative study of histidine in the treatment of thirty-two patients with ulcer, six involving the stomach and twenty-six the duodenum. The second group consisted of fourteen patients, one with ulcer of the stomach and thirteen with ulcer of the duodenum. Of these, four disappeared. The latter group received the conventional treament for ulcer, including diet, atropine, alkalis and, in addition, histidine. To each of the patients of both groups a series of twenty intramuscular injections of 4 per cent solution of histidine was given. Each patient thus received 5 cc. every day. After the treatment had been instituted for three or four days, practically all the patients became free from pain, in spite of a usual history of prolonged and intense pain for many months.

Miscellany

CROONERS

THIS sweet, soft soap, 5 and 10c sentimental stuff called popular music, is enough to slow down anyone's brain. Listen to the Old Apple Tree, I Love You, Meet Me Tomorrow, Love Me In January and October, and any damn-fool idea that comes into one's head, and you'll have enough to degenerate a race.

This drolling, drooling, nasal twang, prolonging agony beyond words, is all right for infants to put them to sleep but not for those who are supposed to remain awake. Every time we hear some bird singing one of those sentimental tunes we want to shoot him. And to think that the general public applauds such stuff. All we can say is that they want 'em soft.

Better the snappy French music from the Folies Bergères. It is over so quickly that you hardly realize it. It is full of pep, short bars, snappy words and most of them are super-marching songs. The titles, too, are snappy—"Mais non, mais non Madame", "Je ne sais pas", etc. Your brain is jacked up, you can function with speed and you don't go on dreaming.

The sad part of these old tunes is that they make us go back to childhood and that is just what mental hygienists are fighting against. Who wants to go into reverse, anyway, even if only for a few moments?

M. W. T.

THE GREATER EVIL

Why the medical profession as a whole should be opposed to socialized medicine is apparent to any layman who will take the trouble to study propaganda in its behalf. Dr. Terry M. Townsend, chairman of the committee on Medical Trends of the State Medical Society, presents some aspects calculated to cause concern to the layman on his own account. He has this to say:

> If the public does not awake . . . they are likely to have foisted on them a system by which they will be subjected to a pay roll tax for medical service. In addition the workingman will be required to contribute to the support of an army of clerks, supervisors, statisticians, "health study experts," snoopers, arguers and propagandists. Their job will be to entrench themselves on the public pay roll, interfere with the doctor as much as possible to make themselves important, and spend a large part of their time keeping in right with the bureaucrats above them. America does not need and does not want a medical system run by non-medical people who could not tell the difference between an x-ray and an electrocardiogram.

Dr. Townsend adds that wherever compulsory health insurance is in operation vital statistics prove that the health of the people there is below the standard now existing in the United States. Laymen might not know about that, but the layman who has ever before come into contact with the squirts, whippersnappers and nosey parkers who invariably attach themselves to bureaucracy understands the rest of it right enough. It is bad enough now for a poor man to go into some clinics to be handled by a sprout just out of medical college as if he were a parcel of none-too-welcome merchandise. What it would be under socialized medicine masquerading as compulsory health insurance is something upon which it is painful to reflect.

It is perhaps true that the health of the general public is no better than it should be. But it is by no means certain that public health under socialized medicine would be much better than it is. A greater evil, however, than indifferent health is the growth of the noxious spirit of bureaucracy.

New York Sun
Feb. 2, 1937.

OBSTETRIC SURGERY AMONG THE GODS

THE Iroquois Indians have a tradition reaching back, as they suppose, some 2,500 years. It concerns the birth of their Creator, and the first case of midwifery in North America. In those days the universe consisted of two stories, or regions, an upper and a lower. The upper region was the part above the clouds. This was a glorious and beautiful world, full of deer, bears, and all desirable game. It was inhabited by supernatural people of great power. The lower world was the one in which we now live, the world below the sky. It was a dark, cold swamp covered with water, and inhabited only by frogs, turtles and other amphibious monsters.

A certain spirit or goddess in the upper world, who happened to be pregnant, wished to go hunting, so she

took two dogs and started across the sky in pursuit of a bear. By some carelessness, the bear, the dogs and the woman all fell down through a hole in the clouds, and began to descend towards the cold and awful swamp below. When the water monsters below saw her coming they were greatly alarmed for her safety. A great turtle spread himself out on the water, and another monster dived and brought up some mud and spread it on the turtle's back to soften it. The turtle grew bigger and bigger, and became the great island now called North America. His shell became the rocks, the mud increased into earth and hills, grass and waving forests appeared, and by the time the goddess alighted she was received in the fine country now lying south of Lake Ontario.

The goddess was pregnant with twin boys, and these precocious, unborn godlings began to dispute how they should make their way into the world. One of them, called "The Good Mind," and afterward named Ni-yoh, the Creator, was a fine sensible fellow, with a sound judgment and benevolent tendencies. He determined to be born in the usual way. The other twin, named "The Bad Mind," was ill natured, and always wanting to do things contrary to propriety. He tore his way out through his mother's side just below her arm, and as a consequence she shortly afterward died.

The Good Mind took his mother's head and transformed it into the sun, and of the body he created the moon, and placed them both in the heavens. He also created men and filled the new continent with game and all good things for their race. The Bad Mind, however, resisted these benevolent works, until finally The Good Mind fought with him, overthrew him, and compelled him to flee to the land of spirits, but The Bad Mind threatened to still do mischief by his spiritual power.

Edmund Andrews, M. D., formerly Professor of Surgery Northwestern University, in *Bulletin of the Northwestern University Medical School*, 2:530, 1900-01.

CANCER

John M. Swan, M.D.

—Concluded from page 195

reported thirty-five additional cases of five year cures of patients treated in our hospitals in 1926: Twelve of the breast, seven of the crevix, five of the gastro-intestinal tract, four of the male genito-urinary tract, two of the body of the uterus, and five miscellaneous malignancies. Twenty-one of these patients, 60.0 per cent, are still living and become ten year cures this year. Two are dead of late metastasis, both cancer of the breast, (5.7 per cent), four are dead of other diseases and eight have been lost (22.8 per cent). Of the four dead of other diseases one patient died of diabetic coma, one of pneumonia, one of atherosclerosis and senility, and one of strangulated hernia.

WE FEEL that it is possible to present similar results in any community in which there are Class A hospitals and a well organized and cooperative profession. It requires someone who is willing to give the time to the collection of the cases and to the follow up and it is also necessary that he receive the support of his colleagues.

THE THERAPY OF PARASITIC DERMATOSES

In collaboration with THEODORE CORNBLEET, BERNARD FANTUS, Chicago (*Journal A. M. A.*, Feb. 13, 1937), presents the therapy of parasitic dermatoses as it is practiced at the Cook County Hospital. The meaning of the term "parasitic dermatoses" is restricted here to skin infestation with animal parasites, the term infection being employed for invasion of the skin by bacteria. In pediculosis there are three types of infestation, depending on the type of parasite. These are head louse, body louse and pubic louse. In infestation by the head louse clipping the hair facilitates the treatment but it is not necessary and is certainly inexcusable in girls and women, unless the hair is so matted that it is found impossible to apply the necessary remedies. For the killing of the parasites the most cleanly and hence generally best is the thorough sponging into the scalp and hair of a 1:500 solution of mercury bichloride in diluted alcohol twice daily for several days in succession. The chief disadvantage of this lotion is that it produces a burning sensation if the surface of the skin is damaged. While lice cannot be drowned in water, they can be drowned

in oil. The thorough application of a thick layer of petrolatum suffices. Adding as many drops of benzene as there are grams of petrolatum facilitates its introduction into the respiratory apparatus of the parasites. Softening and combing out of the "nits" is facilitated by treating the scalp at bedtime with warm vinegar and enveloping it in a rubberized cloth. The next morning the scalp is washed with soap. The eggs are still in place but softened. A fine toothed comb removes them from the hair. In body louse infestation the clothing and blankets should be disinfected by autoclave. The clothing may be soaked in 2 per cent dilution of saponated solution of cresol at a temperature above 32°F. for twenty minutes or dipped in gasoline or in cleaners' naphtha. Sulfur may be dusted on the inner surfaces of the clothing to lessen the chances of reinfestation after it has been subjected to any one of these processes. Fumigation of huts or other places that were inhabited by infested groups of men is quite as necessary as in disinfestation of their clothing. A cleansing bath with soap and hot water suffices for the individual. Destruction of ova is especially required when dealing with groups of men. For this purpose a bath and a mercurial lotion are usually sufficient in body louse infestation. The simplest and cleanest way to clear up a pubic infestation is to sponge the parts with a 1:2,000 mercury bichloride solution twice daily for three or four days in succession; then less frequently, every three to seven days, for two to three weeks. In scabies all clothing that has been in contact with the skin during the course of the disease must be boiled, laundered or dry cleaned (which means a thorough immersion in naphtha). The patient should take a prolonged warm bath, thoroughly scrubbing with soap and brush. After drying the skin the remedy is applied to the entire skin below the clavicles. Sulfur ointment, preferably diluted, is to be used night and morning for a total of six times. Then the bath is repeated and the clothes worn during the treatment should be boiled, laundered or dry cleaned. For those who have an idiosyncrasy against sulfur, 5 or 10 per cent beta-naphthol ointment should be resorted to. Continuance of the itching means that the treatment was not thorough enough, reinfestation from contacts, residual irritation of the skin, possibly aggravated by the treatment or habit formation. To exclude the first possibility, one may repeat the treatment, which should always suffice. Infested contacts must be eliminated by treatment. Residual irritation requires that the skin be soothed by calamine lotion or other bland application, or by 10 per cent borated cold cream if it is excessively dry. Habit requires psychotherapy, possibly plus calamine lotion as a placebo.

EFFICACY OF VARIOUS MEDICAMENTS IN TREATMENT OF VINCENT'S STOMATITIS: REPORT OF 794 CASES

G. W. FARRELL and W. A. MCNICHOLS, Dixon, Ill. (*Journal A. M. A.*, Feb. 20, 1937), point out that Vincent's stomatitis must be differentiated from syphilis, diphtheria and malignant growth, and less frequently from scurvy, pernicious anemia, aplastic anemia, acute leukemia, bismuth or mercurial stomatitis and mouth manifestations of erythema multiforme and pellagra. This differentiation must be accomplished by examination of the blood, and biopsy as well as by negative or positive smears. In their series of 704 institutional cases (349 females and 355 males) and ninety private cases there were many complications with six deaths. They found that it attacked the larynx, the tracheal bronchial tree, as Jackson has observed, producing bronchopneumonia and lung abscesses. It also produced acute suppurative otitis media and two fatal cases of noma. In private practice they were called to see three patients who were dying following the extraction of teeth in the presence of a mild Vincent infection. These patients had extensive ulcerations involving the rectum and genitals, from which pure cultures of Vincent's organisms were obtained. Their blood streams did not show the Vincent organisms. These patients seemed to die of severe toxemia and dehydration due to excessive diarrhea. In all cases and under all types of treatment in order to get a proper lasting cure, the authors feel that thorough prophylaxis and scaling of the teeth, accompanied by the removal of all mechanical irritations, is as necessary a requisite in the treatment of the disease as the

medicinal side of the treatment. Abstinence from cigaret smoking and alcohol is to be recommended during the infection. The slightest surgical procedure, even in the presence of the mildest types of Vincent's infection, is deprecated. In most cases the disease becomes more acute the longer it is allowed to progress without treatment. Solution of hydrogen peroxide, U. S. P., is the prime factor in curing Vincent's infection. The various other medicaments tried were neoarsphenamine and glycerin 10 per cent, chromic acid 15 per cent, ultraviolet rays, aconite, iodine and chloroform, aniline dyes and tincture of benzoin. Some of the cases may be assisted by the use of the other medicaments, but one cannot be sure of a cure in all cases unless solution of hydrogen peroxide is used in conjunction with them. It cannot be used to excess. Solution of hydrogen peroxide was always used at least four times a day, full strength. The recoveries were quickened in some cases when it was used more frequently; that is, every two hours.

MASKED ALLERGENS

The protean manifestations of the allergic state and the apparent infinitude of substances to which the human being may become sensitized have made us more conscious of the importance of knowledge in this field. Reports of new agents as sensitizers are encountered with increasing frequency. Recently a starch-splitting enzyme has been shown to be the causative agent in untoward gastro-intestinal symptoms following its administration. Certain constipation correctives of plant origin produce similar results. Many of these events cannot be foreseen. When products already marketed and of known composition are concerned, much needless inconvenience and not infrequently even dangerous reactions may be avoided by investigation previous to use. The more adequate labeling of these materials will prevent much unnecessary distress. No group of individuals is more aware of its environment, is more careful of its food, its drugs, its very milieu, than those who are allergic. Unless forewarned by their physicians or by the label of the manufacturer, these otherwise conservative and wary folk must learn by grievous experience. It makes considerable difference whether vitamin preparations (now in seasonally increased usage) are put up in fish oil, maize oil or peanut oil. The palatability and digestibility of potato chips may depend entirely on whether they are cooked in lard, cottonseed oil or linseed oil. The small fraction of wheat in a supposed "all-rye" bread may spell the difference between a happy or a miserable few hours. The unlabeled bromide sedative, phenolphthalein laxative or iodide compound may cause more discomfort than the conditions they allegedly correct. The memory of any practitioner could multiply these examples many times.

Proper labeling of such commodities should set forth not only their principal ingredients but every substance contained in them or the significance in their preparation. The ready response of the public to such a plan would be manifested by the increased use and prescription of products so marketed. There would be no need for compulsion to bring the usual stand-patters and conscientious objectors into line, for once the advantages of such a program were seen, they would be quick to follow, and an informed public would enjoy the benfits of this new protection.

Caveat emptor was never meant to apply to the purchase of commodities that affect the health of a nation. The need for such a warning will automatically disappear with the unmasking of our commercial labels. Education and experience have made the allergic patient cosmetic conscious, food and drug conscious, and household conscious. To remove the cloak of obscurity from articles in common use is a decided step.